Privacy Behaviors of Lifeloggers using Wearable Cameras (Supplemental Materials)

Roberto Hoyle[†]   **Robert Templeman**[†♭]   **Steven Armes**[†]
Denise Anthony[‡]   **David Crandall**[†]   **Apu Kapadia**[†]

[†]School of Informatics and Computing   [‡]Dept. of Sociology   [♭]Naval Surface Warfare Center
Indiana University Bloomington   Dartmouth College   Crane Division
Bloomington, IN, USA   Hanover, NH, USA   Crane, IN, USA

The attached pages include the following supplementary materials: (1) daily survey artifacts, (2) post-study interview questions, (3) additional materials, and (4) study guidance for participants.
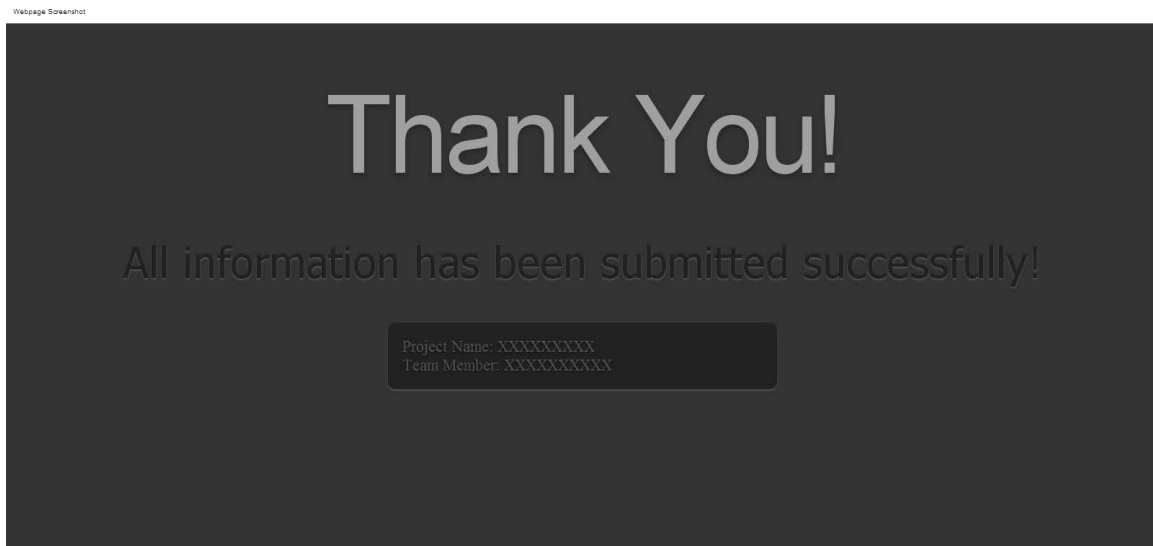
Daily Data Labeling Survey

Participants will be required to log into our survey website from a computer (desktop or laptop) daily (once a day for three days). The purpose of this survey is to label the data that is collected on their mobile phone.
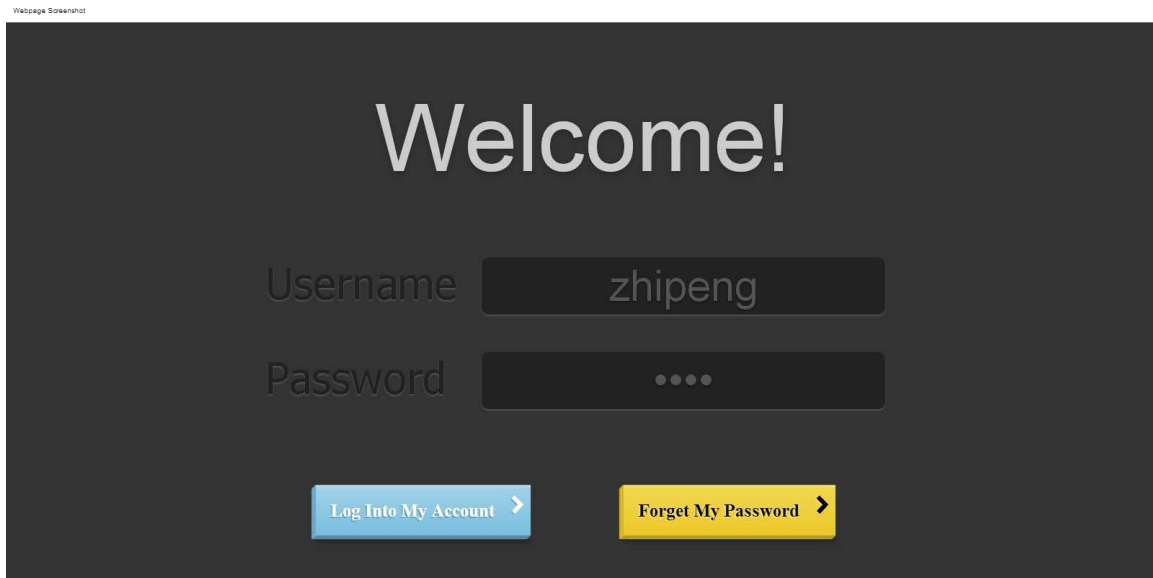
Figure 1 - Login screen. The user will generate an account on our survey server when enrolling in the study.

Figure 2 - Successful login.

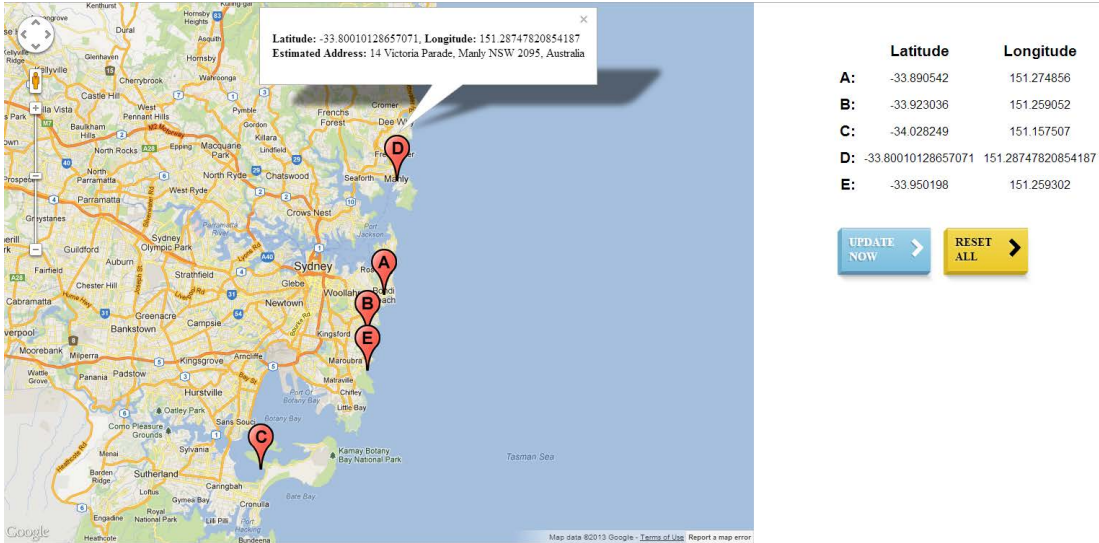|	Latitude	Longitude
A:	-33.890542	151.274856
B:	-33.923036	151.259052
C:	-34.028249	151.157507
D:	-33.80010128657071	151.28747820854187
E:	-33.950198	151.259302

UPDATE NOW   RESET ALL

Figure 3 - The collected data is location-tagged. Our raw location data is simply geospatial coordinates. The users will provide coarse labeling of these locations. We present the locations on a map for convenience.
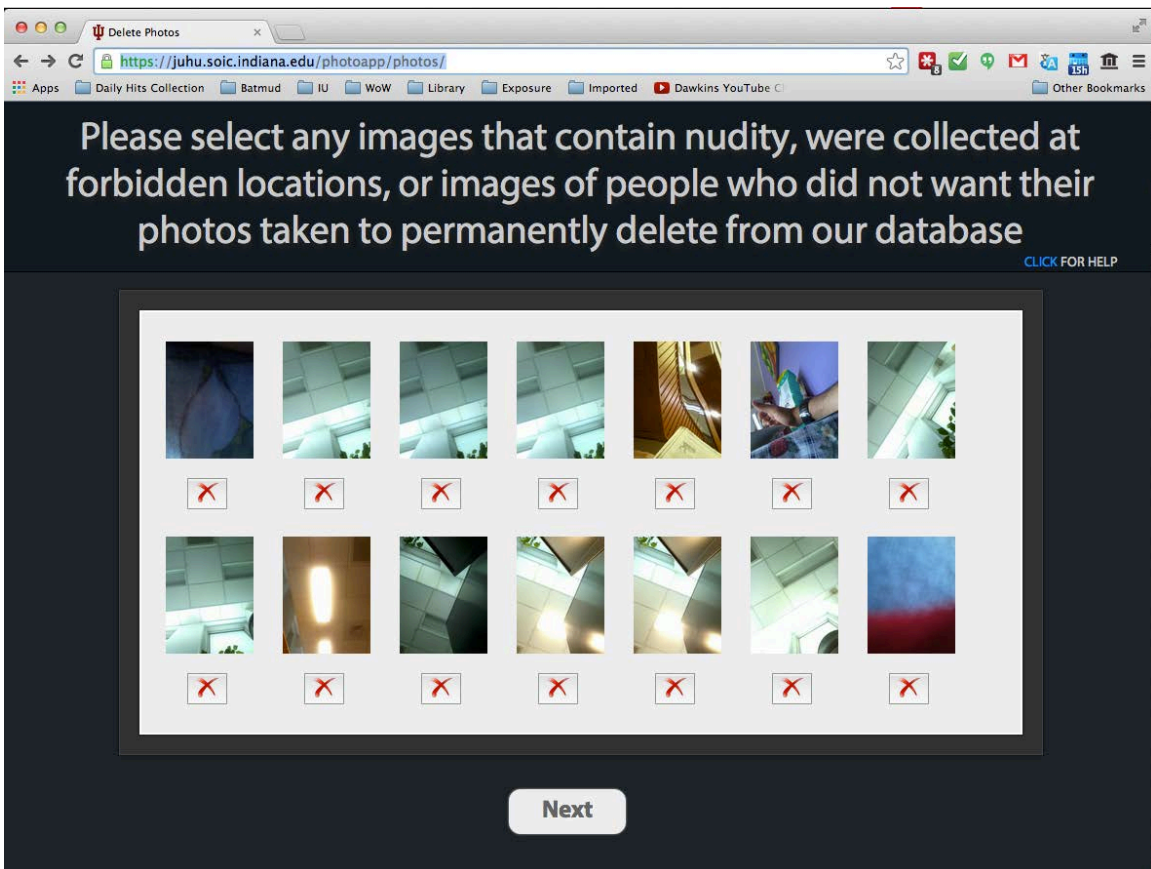

Figure 4: Users will have an opportunity to permanently delete images thus removing them from the archived dataset. This was suggested by IU General Counsel.

Figure 5 - Dialog box prompting participant to explain why they deleted a photograph.
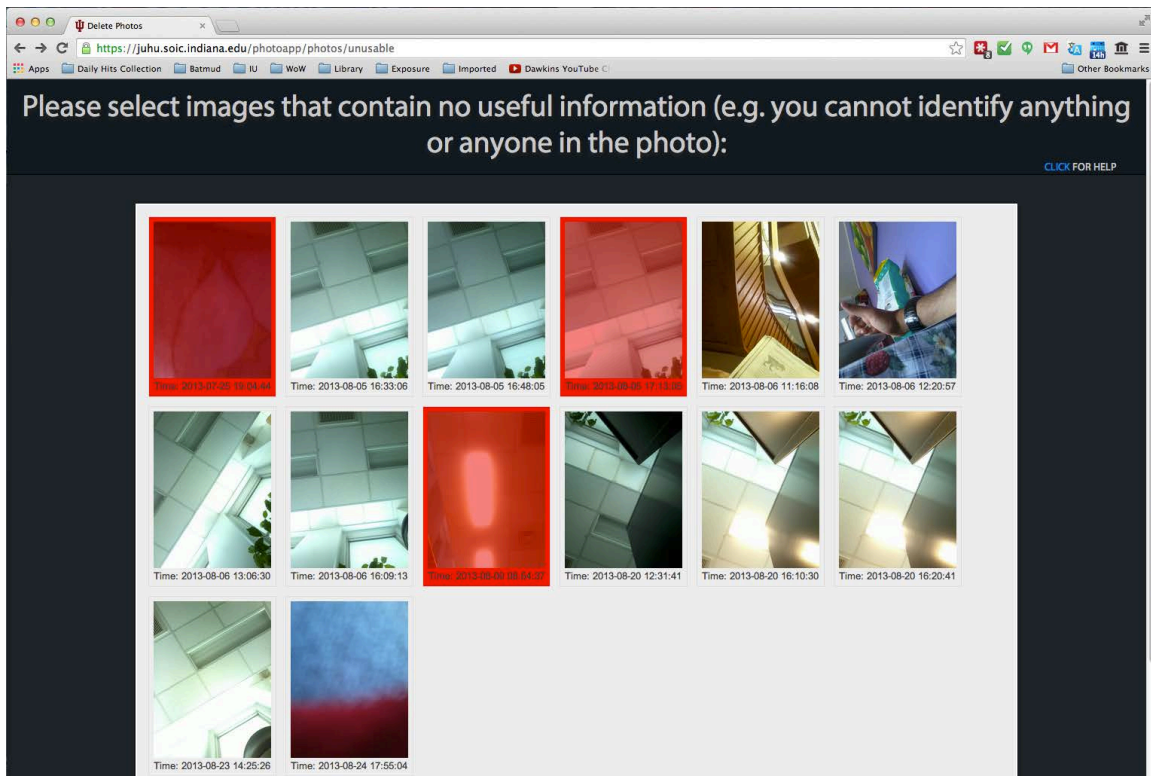

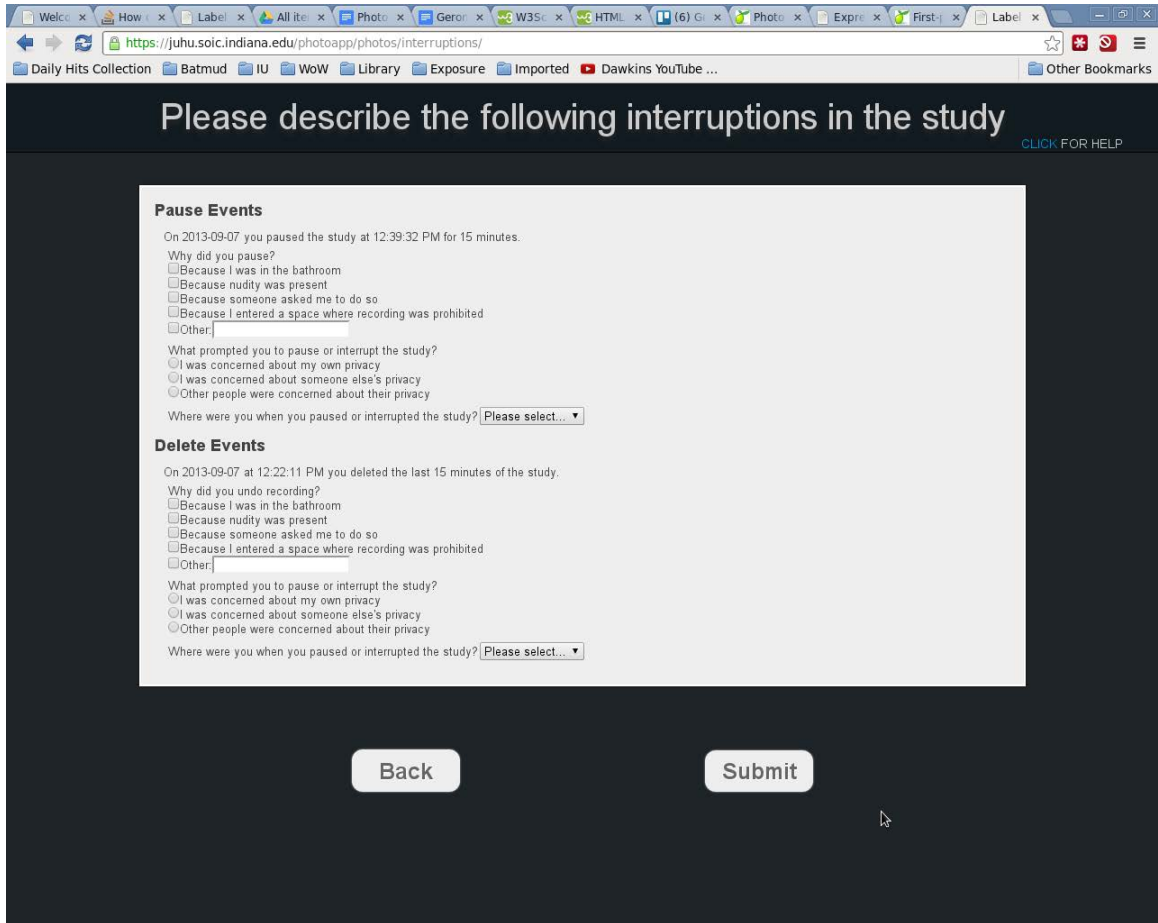**Figure 6 - Users are asked to select images with no useful content.**

Figure 7: Our Android application allows users to pause data collection and/or delete recently collected data from our server. This part of the survey seeks to find out why they disrupted data collection.
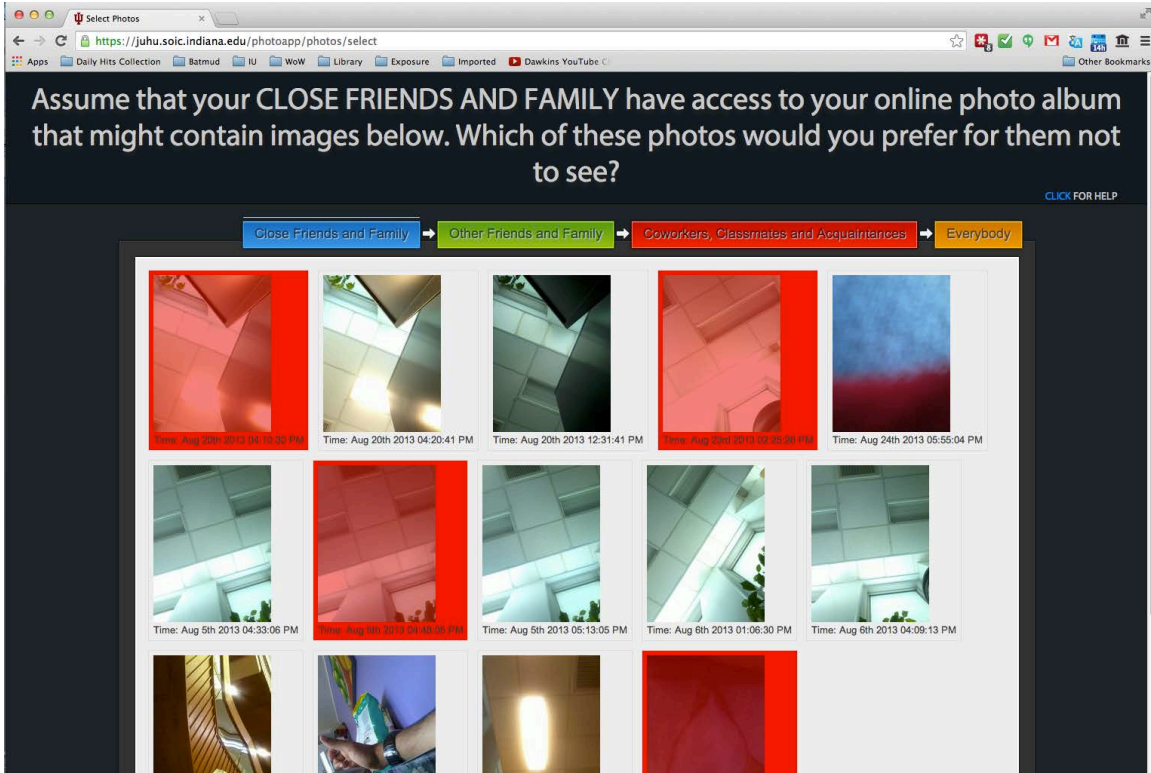
Figure 8 - For the 4 identified groups we ask the participant to identify those images that they would not share with the specified group.
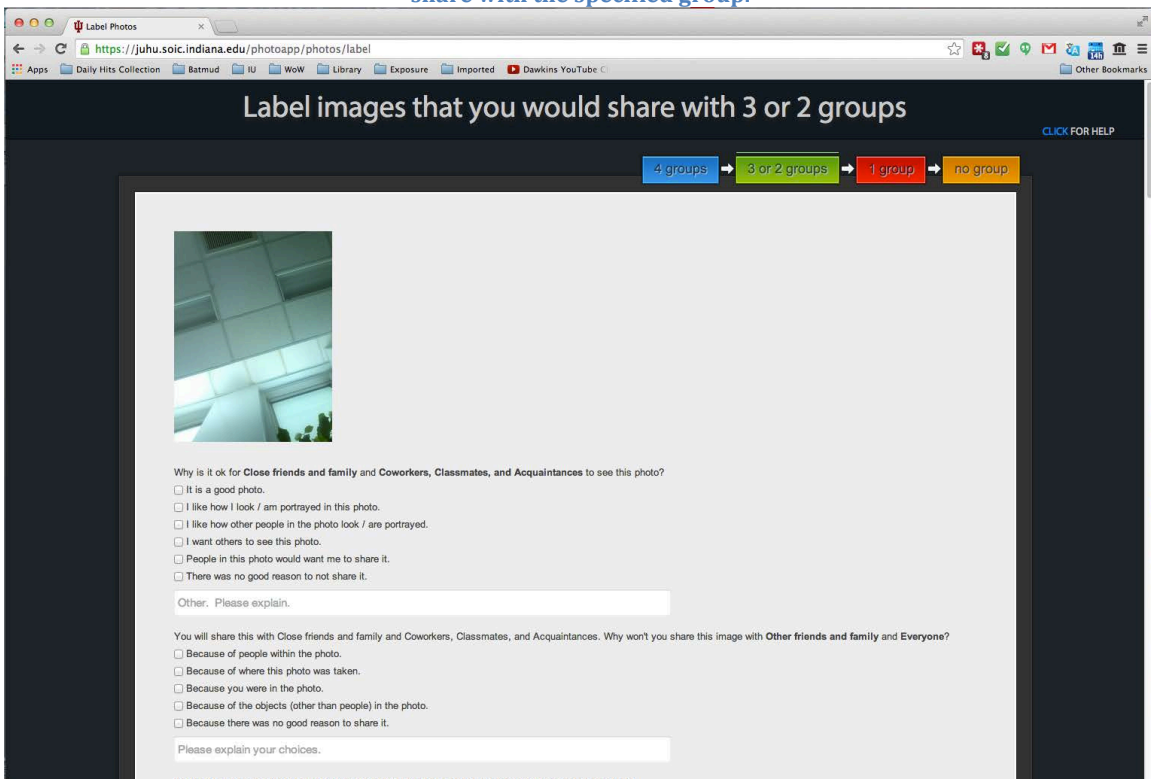

Figure 9 – For approximately 75 images over three days, we ask for details about their sharing preferences with respect to image content.
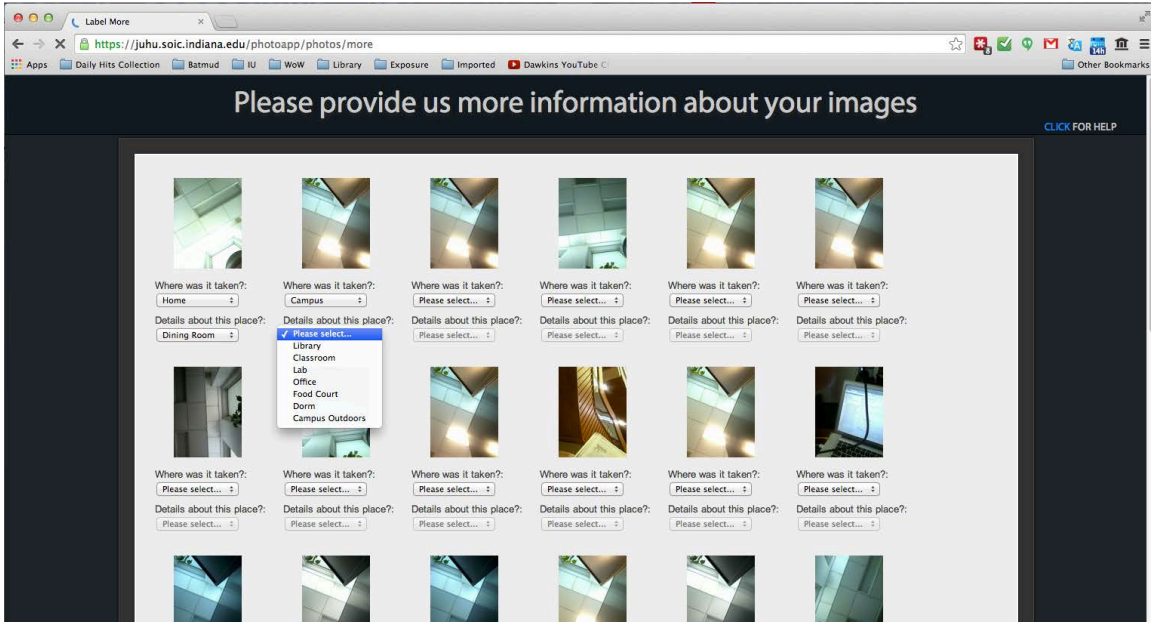
Figure 10: This page of the survey asks users to label where each image was taken.

Post-Study Interview

We will take audio recordings of the interviews

How comfortable are you with using smartphones?

       7-point Likert scale (extremely uncomfortable to extremely comfortable)

Did you have any problems with the Locasa app?

Did you have any problems completing the web surveys?

Please explain what lifelogging or lifeblogging is?

How did people around you react to device? Give a couple of examples.

- How did they feel (code emotions)?
- (for each situation) Where did this reaction occur?

Did anyone ever tell you to turn off the device or ask not to take his/her photo?

If Yes to previous, Please explain

If you were disallowed from collecting images, did you use the pause or delete functions in the Locasa app?

Do you experience conflicts with bystanders that you remember?

If 'yes' above, please describe (interview question only)

Did anyone around you express (positive) interest in the device?

Were any groups of bystanders noticeably against the study?

Did participating in this study influence your behavior (e.g. did you make decisions based on the fact that our device was documenting your activities)?

Please detail if answered yes above

Do you feel any other thoughts about our study that we may not have covered?

Additional Material

INDIANA UNIVERSITY SCHOOL OF INFORMATICS Bloomington This is a study about how people use photologging applications, such as Google Glass and has been approved by Indiana University's Institutional Review Board and General Counsel. If you have any questions, please contact the researchers at photostudy@cs.soic.indiana.edu or view our FAQ at https://juhu.soic.indiana.edu/photoapp/faq	**How will these pictures be used?** University researchers will be analyzing characteristics of the photographic images to see if they help us predict whether a user is more or less likely to share the image. **What if I don't want my pictures included?** You can ask the participant to delete any photos of you, or all data collected within the past hour. If you have difficulty with this, email photostudy@cs.soic.indiana.edu with a participant's number and the time and we will remove the photos. This was given to you by participant # 15

Cards provided to participants to hand out in case they encountered a conflict with a bystander

Photo Study Do's and Don'ts for Participants

During this study, you will be carrying a device on your neck that will be taking a picture of your surroundings every five minutes. It will also be taking samples of your movement, via an accelerometer, ambient sound levels, ambient light, and your location. There will be no audio recording of conversations. To make this experience pleasant for everyone involved, please observe a few guidelines while participating in the study.

DO's:
- **DO** keep the harness around your neck with the phone's screen facing you, and the rear camera of the phone facing out so that it is just peeking out of the harness.
- **DO** keep the harness outside of your regular clothing, so that it has an unblocked view of your surroundings.
- **DO** wear the harness so that the label is observable by those around you and in the phone's view.
- **DO** explain to persons who may be recorded the purpose of the study and the device.
- **DO** offer the informational cards provided, if you encounter anyone who requests more information about the study. The identifier on the card can be used to reference photos in an anonymous manner.
- **DO** put the device away if people around you express discomfort with the device or express their desire not to be recorded.
- **DO** pause the device whenever you want to stop recording, even if you need to put the device away. Pausing recording allows us to track how frequently people choose to avoid recording.
- **DO** contact us if you have any questions or concerns. We can be reached by email at photostudy@cs.indiana.edu.
- **DO** protect the device from water. For example, please put the device away if you're outdoors and it is raining, or when you engage in sports or recreation where the device can get wet.
- **DO** exercise caution with the lanyard so that it does not strangle or choke you.

DO NOT's:
- **DO NOT** record any form of nudity or illegal activity.
- **DO NOT** use the device in places where recording could cause a violation of privacy, including: restrooms, locker rooms, changing rooms, bedrooms, and other private spaces where individuals have heightened expectations of privacy.
- **DO NOT** use the device in places where it is, or may be, prohibited or illegal to take pictures, including medical and treatment facilities, museums, secured or restricted areas such as airport security zones, or anywhere else where signage is posted instructing you to refrain from using recording devices.
- **DO NOT** use the device in a classroom setting unless you have the prior approval of your instructor.

   In all of these instances where the device should not be used, please pause the study for the period of time in which you are in those situations or

locations. **You should remove the device from your neck and put it in your pocket just to make sure that nobody suspects you of taking surreptitious images.**

- **DO NOT** record people who have expressed a desire to not be recorded in private spaces. If the person(s) does not agree to the photos being taken, you should pause the study. If someone confronts you about the phone, explain what you are doing, and let them know that you will be reviewing every photograph that may be taken before it is viewed and used by the study's researchers.