



## CONSENT TO PARTICIPATE IN RESEARCH

### *Cultural Probe of Dynamic Wearable Technology*

#### **Introduction and Purpose**

Our names are Christine Dierk, Molly Nicholas, Sarah Sterman, Rundong Tian, and César Torres. We are graduate students working with Professor Eric Paulos in the Department of Electrical Engineering and Computer Science at the University of California, Berkeley. We are planning to conduct a research study, which we invite you to take part in.

The purpose of our research study is to explore the implications of new wearable technologies. The technologies we intend to explore are a baseball cap, a beanie hat, a hooded sweatshirt, and a wearable pin. These prototypes include an embedded e-ink display (as found in kindles, smartwatches, and other commercial products), a custom circuit board (as found in small toys, remotes, and all electronics), and an embedded coil (as found in most ID keycards, electronic car keys, and security stickers in stores). We want to discover how users utilize the technology in their own lives, and overall gauge their reaction to the technology.

#### **Procedures**

##### *Initial Interview (~30 minutes)*

You will be asked about your experiences with wearable/mobile technologies including mobile phones, watches, and activity monitors. You will also be asked about your experience with related form factors; for example, wearable form factors such as clothing, accessories, and cosmetic forms, as well as other technological devices. We will introduce our wearable prototypes (hat, hooded sweatshirt, wearable pin) and demonstrate their use. You may interact with the prototypes and we will answer any questions that you may have about usage. We will describe the “out of lab” exploration, and answer any questions that you may have about the study. We will also present an accompanying mobile application, that you will need to download onto your phone. We will demonstrate the application and its use during the initial interview.

##### *“Out of Lab” Exploration (2 weeks)*

After the initial interview, you will choose one of the three prototypes (hat, hooded sweatshirt, wearable pin) and take it with you when you leave. This device is yours to keep and to use for a period of 2 weeks. To interact with the device, you open our mobile app on the phone, then hold the mobile phone up to the embedded coil for approximately 2.5 seconds in order to power and send data to the device. The display will now showcase the new design. After removing the phone, the device will be unpowered yet the display will continue to showcase the design. During this time period, you are free to interact with the device as much or as little as you choose. The goal is to explore how this artifact fits in to your day-to-day life. While you have the device, we ask that you take pictures with your smartphones, capturing your thoughts. These pictures should capture contextual information capturing how and where you are interacting with the technology. For example, you may take a picture of the hat sitting on your desk, or your hooded sweatshirt draped over the back of a chair. The pictures will be transferred to us at the in-person interview below via a secure, 2-factor authentication controlled email. The mobile application will also log data based on usage. This data is limited to date, time, and design

(image/text) that was uploaded to the display. The main purpose of these images and collected data is to inform our final interview.

#### *Final Interview (~1 hour)*

We will schedule a final interview with you in our lab. You will be asked to bring the wearable prototype (hat, hooded sweatshirt, wearable pin) and the mobile device (either the one provided, or your own) to this interview, where we will reflect upon your “out of lab” experience. Through an informal interview, we will ask what you thought about the technology, how you used it in your own life, and how you envision future interactions with it. We will base our conversation partly on your submitted photographs and collected logs. In the rare case that you are unavailable to come to our lab for the final interview, we may conduct this interview over the phone.

With your permission, we will audiotape and take notes during all interviews. We will obtain verbal consent at the beginning of each individual interview for this audio recording. The recording is to accurately record the information you provide, and will be used for transcription purposes only. If you choose not to be audiotaped, we will take notes instead. If you agree to being audiotaped but feel uncomfortable at any time during the interview, we can turn off the recorder at your request. Or if you don't wish to continue, you can stop the study at any time.

**Study time:** The estimated time commitment for this study is 1 hour and 40 minutes.

Initial interview/demo: ~30 minutes

Time photographing experiences: ~5 minutes per week.

Final interview: ~1 hour

**Study location:** All interviews and demonstrations of the wearable technologies will take place in Sutardja Dai Hall on the UC Berkeley campus.

#### **Benefits**

There is no direct benefit to you from taking part in this study.

We hope that the information gained from this research study will help advance knowledge of appropriate form factors and interactions with new technological artifacts.

#### **Risks/Discomforts**

We don't anticipate any of the research questions will make you uncomfortable or upset. You are free to decline to answer any questions you don't wish to, or to stop participating at any time.

No foreseeable harm is anticipated with this study. Our wearable technology closely mimics existing clothing and accessories that are familiar and comfortable, and the electronics enclosed in the artifacts will be safe and closely approximate familiar electronic devices. Additionally, our wearable device includes no battery or on-board power supply.

As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk.

**Confidentiality**

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

To minimize the risks to confidentiality, we will do the following:

The data will be collected with a key-value system. A single physical document (key) will link the research data to identifiable information.

Recorded logs will be stored locally on your phone and transferred to us during the final interview.

Research records, including audio and recorded logs, will be stored in a locked cabinet (physical materials), in a secured building and/or in an encrypted, on a password-protected computer (digital materials including photographs).

Personal identifiers (email addresses, key) will be destroyed a month after the end of this study.

Main research study data will be retained up to five years after the conclusion of the study.

The audio will be transcribed one month after the end of the study and tapes will be erased after transcription. The research data will be maintained for possible use in future research by us or others. I will retain this data for up to five years after the study is over. The same measures described above will be taken to protect confidentiality of this study data.

**Media Release**

During the final interview, we may ask you to sign a Media Records Release Form so that we may publish a subset of your photographs from the “Out of Lab” Exploration. These photographs will be anonymized where possible. You may also exclude any number of photographs from release.

**Compensation**

Compensation will be determined as follows:

1. For any in-lab experience, you will be compensated at the rate of \$20/hr. For any phone interviews, you will be compensated at the same rate.
2. For the longitudinal portion, participants will be compensated at the rate of \$5/week, and an additional \$5 for every set of 10 photographs (maximum of \$20).

The initial interview will last approx. 30 minutes; the final interview will last approx. an hour.

You will be compensated a maximum of \$60 for your participation.

If you choose to withdraw from the research study, compensation will be determined from the guidelines above. If you choose to withdraw during the middle of an interview, compensation will be prorated at the appropriate rate. Payment will be through electronic Amazon gift card. A

link to the cards will be sent via email to your preferred email address within 1 week of participating in the study.

### **Rights**

Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. Whether or not you choose to participate, to answer any particular question, or continue participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

### **Questions**

If you have any questions about this research, please feel free to contact Christine Dierk. She can be reached at [cdierk@berkeley.edu](mailto:cdierk@berkeley.edu) or 919-801-5297 or you can contact the principal investigator Eric Paulos at [paulos@berkeley.edu](mailto:paulos@berkeley.edu)

If you have any questions about your rights or treatment as a research participant in this study, please contact the University of California at Berkeley's Committee for Protection of Human Subjects at 510-642-7461, or e-mail [subjects@berkeley.edu](mailto:subjects@berkeley.edu).

\*\*\*\*\*

### **CONSENT**

You will be given a copy of this consent form to keep.

If you agree to participate in this research study, please print a copy of this page to keep for future reference, then click on the "Submit" button below.