

## **APPENDIX 1**

### **Application to the Research Ethics Committee**

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2 February, 2004

### **Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture**

#### **Preamble**

This Ph.D. project in Sociology investigates emerging relations between space, culture and new wireless technologies – including social and intellectual milieus of current international technology research and design practice. I have successfully defended my thesis proposal and my research is funded by a doctoral fellowship from the Social Sciences and Humanities Research Council of Canada (SSHRC).

#### **Purpose of the Project**

This project in applied cultural research will contribute to an understanding of the social and cultural contexts of emerging wireless technology design and use. It will shed light on how new technologies “come to be” and provide insights into wireless technology in everyday urban life. Explicitly concerned with creative practice, this project also investigates the roles of play and intimacy in technological innovation and use. Little research has been conducted into design culture, and to the best of my knowledge no research has addressed ubiquitous computing research and design. My project contributes to these fields of inquiry as a starting point for articulating new spaces for social, ethical and political action concerning technology.

#### **Process for Obtaining Informed Consent**

Initial informed consent has been obtained from each of the case study project leads, who have also requested volunteer participants from the project team. Confirmed participants include 2-4 people from each of the following research and design projects:

Mobile Bristol – Hewlett Packard, UK  
Sonic City – Future Applications Lab & PLAY Research, Sweden  
Texting Glances – Trinity College Dublin and Media Lab Europe, UK  
Urban Tapestries – Proboscis, UK

Each participant will be given an Information Sheet (Appendix A) indicating the purpose of the study, the voluntary nature of participation and strict confidentiality of responses. Respondents are able to withdraw at any time. Following the presentation and explanation of the Information Sheet, agreement to participate in the study will be indicated by a signature on the informed consent form (Appendix B) granting access to the research lab, interviews, follow-up and publication.

#### **Research Instruments**

This project will employ a questionnaire I developed. Questions will be open-ended and collected one-on-one with individual participants and by email. “Cultural probes,” a

method pioneered by Bill Gaver and others<sup>1</sup>, consist of a disposable camera and postcards. Further documentation will be collected in the form of field notes and photographs. My research protocol is outlined in Appendix 3.

### **Anonymity and Confidentiality**

At the point of contact, each project team volunteered participants, and anonymity was limited within each team. Participants are aware of the other participants from their respective projects only. At the point of publication, all participants are guaranteed complete confidentiality and anonymity.

All data collected in this study will be kept strictly confidential through the assignment of a coded identification number. Interviews will be digitally recorded with participant consent. Interview data and field notes will be anonymised before publication or release. Future publication of photographic documents will be subject to the approval and release of individuals pictured, the person who took the photo, or the project director as necessary.

At the time of in-person interviews and site visits, I will leave behind numbered, self-addressed and stamped postcards sealed in envelopes, with more postcards mailed from Canada at weekly intervals. Participants will be asked not to sign or identify themselves on the postcards. These will pass through the post, and participants will be asked to answer questions, revealing information as they deem appropriate. The postcards will be mailed to my personal home address in order to improve confidentiality. In addition to the postcards, participants will be given disposable cameras to take photographs of design inspirations. Participants will be informed that photos of people require their permission, unless taken in public situations where there is no expectation of privacy.

### **Storage of Data**

Numbers will be used as an anonymity tool. Field-notes, digital recordings and photographs will be stored in a secure place, accessible only to me and my Ph.D. committee. Five years after the completion and defense of the Ph.D. Dissertation, these data will be destroyed.

### **Risks and Benefits to Participants**

The present study poses no risks to participants. The results of this inquiry may lead to a more comprehensive and efficacious public policy approach to the research, development, implementation and use in Canada.

### **Dissemination of Results to Participants**

Participants have the right to review their interview and “cultural probe” data and withdraw permission to use them at any time prior to the publication of the results of the research. Upon the completion of the study, relevant information will be made available to each participant.

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<sup>1</sup> Gaver, Bill, Tony Dunne and Elena Pacenti. 1999. Design: Cultural probes. *Interactions of the ACM* 6(1): 21-29.

**(Appendix A)****Information Sheet****Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture****Principal Researcher**

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**Purpose of the Project**

I am interested in the relations between wireless technologies, space and culture. How may emerging ubiquitous and pervasive technologies shape our experiences of everyday life in the city? What sorts of playful and intimate relations are created in the research, design and use of these new technologies? My research investigates social and cultural contexts of technology design and use.

Your project has been selected as a case study in the research, design and development of collaborative wireless technologies for urban use. I hope to learn more about these contexts in order to better understand specific social, cultural and intellectual milieus of ubiquitous computing. This research will also help to shed light on users and contexts of use for emerging technologies.

**Anonymity and Confidentiality**

All data collected in this study will be kept strictly confidential through the assignment of a coded identification number. Field notes, interview and cultural probe data will be anonymised before publication or release. Future publication of photographic documents will be subject to the approval and release of anyone pictured, the participant who took the photo or the project director, as necessary. Only the researcher and Ph.D. Committee will have access to data collected.

**Right to Withdraw or Omit**

Your participation in this research is completely voluntary. You can participate as much or as little as you wish. You do not have to answer any particular question. There is no need to explain your reason for declining to answer a question or deciding not to participate in this study.

**If you have any questions please ask me at any time. You can also email me.**

**(Appendix B)****Consent to Participate in Research**

"Intimate And Playful Technologies: Ubiquitous Computing, Space And Culture" Ph.D. Dissertation Project

You are asked to participate in the dissertation project of ANNE GALLOWAY, Ph.D. Candidate, Carleton University. You were selected as a participant in this study because you are someone who is engaged in, or is knowledgeable about, activities in wireless, ubiquitous, augmented or mixed reality technologies for urban and social contexts.

### **Purpose of the Study**

The dissertation project - Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture - investigates emerging pervasive computing, and the social and intellectual milieu of ubiquitous computing design. As part of the larger project, the investigator is conducting case studies of technology research and design projects currently in-progress in the UK and Sweden to better understand the social and cultural contexts of the research, design and use of wireless technologies.

### **Procedures**

As a volunteer participant in this research, you are asked to answer a series of questions related to your work in the \_\_\_\_\_ project. The investigator will administer both email and in-person interviews/questionnaires. The questions will relate to the nature and objectives of the project, as well as your views on urban and social life, and the interviews/questionnaires will take approximately 2-3 hours of your time, with time allowed for follow-up

For in-person interviews, the investigator will be taking notes and using a digital voice recorder. The interviews will be conducted in your workplace or at a location of your choosing. At the time of site visits, the investigator will also leave behind "cultural probes" consisting of postcards and disposable cameras, with instructions for participation and return shipping to the investigator. All shipping costs will be covered by the investigator. During site visits, I am also interested in taking pictures of the progress of the project, and participating in technology demonstrations.

It is expected that the investigator will conduct follow-up interviews in the spring/summer of 2004 once the preliminary data from interviews and cultural probes has been analysed and the design project has been further developed. She may also contact you by telephone or e-mail after the interview if there were any points arising from the interview that need to be clarified. You may also contact the investigator yourself should you recall any information that may be of use.

### **Potential Risks and Discomforts**

None. The nature of the questions is not personal or confidential and therefore poses no emotional, psychological or physical risk to you, the participant. You are asked to answer questions only as you deem appropriate, and you may refuse to answer any question without explanation. Participants agree to be interviewed during work hours remunerated by their employer, therefore the research also poses no economic risk to respondents.

### **Potential Benefits to Subjects**

You will learn more, through the interview, about the issues and considerations involved in social and cultural studies of technology and design. While on-site, I am available for department or team seminars to discuss my research. Electronic copies of the final

results of the Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture Ph.D Dissertation Project will also be made available to you.

### **Confidentiality**

Information obtained in connection with this study that can be used to personally identify you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of assigning a unique code number to each participant. The key to the code will be maintained by the investigator offline in a separate file and will not be made accessible to anyone outside the Ph.D. Committee. Personally identifiable information will not be released to any party without your permission or as required by law.

You have the right to review your interview data and withdraw permission to use them at any time prior to the publication of the results of the research. The data will be stored in a secured file and will only be made available to the investigator and the Ph.D. Committee. The participants will remain anonymous to third party researchers as their names will not be published in any documents. The nature of the data resulting from the interview and cultural probes are not personal or confidential, however the photographs, notes, digital recordings and consent forms will be kept in secure storage for the purposes of maintaining confidentiality by the investigator.

### **Participation and Withdrawal**

Your participation is entirely voluntary. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time and without penalty. You may also refuse to answer any questions you do not want to or cannot answer and remain in the study. You are not waiving any legal claims, rights or remedies because of your participation in this research study. The investigator reserves the right to use any material gathered before the time of your withdrawal, and may withdraw you from this research if circumstances arise which warrant doing so.

### **Identification of Investigators**

If you have any questions or concerns about the research, please feel free to contact:

ANNE GALLOWAY  
Ph.D. Candidate  
Dept. of Sociology & Anthropology  
Carleton University  
1125 Colonel By Drive  
Ottawa, ON, K1S 5B6 Canada  
Mobile: 1.613.262.8405  
E-mail: [anne@plsj.org](mailto:anne@plsj.org)

ROB SHIELDS  
Professor (Supervisor to the Ph.D. Candidate)  
Dept. of Sociology & Anthropology  
Carleton University  
1125 Colonel By Drive  
Ottawa, ON, K1S 5B6 Canada  
Office: 1.613.520.2600 x2602  
E-mail: [rshields@ccs.carleton.ca](mailto:rshields@ccs.carleton.ca)

LESLIE MACDONALD HICKS,

Ethics Committee Coordinator,  
Carleton University,  
1125 Colonel By Drive  
Ottawa (ON) K1S 5B6, Canada,  
Office: 1.613.520.2517  
Email: [LeslieMacDonaldHicks@pigeon.carleton.ca](mailto:LeslieMacDonaldHicks@pigeon.carleton.ca)

See also: Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans  
(<http://www.nserc.ca/programs/ethics/english/policy.htm>)

**Signature of Research Subject**

**Date**

**Signature of Investigator**

**Date**

**Permission to Publish and Use for Educational Purposes**

I, \_\_\_\_\_ grant permission to ANNE GALLOWAY, Ph.D. Candidate, Carleton University, to publish, present, and use any non-personally identifiable or non-proprietary data collected during the Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture Ph.D. Dissertation Project.

For example, the researcher may use excerpts from interviews conducted, or excerpts of digital audio recordings, photographs or examples of digital objects provided to inform the research and/or papers, reports and etc. for any academic and educational purposes.

This permission extends to any future revisions and editions of any publication, presentation, or report, including the non-exclusive worldwide rights in all languages, and to the prospective publication in academic, research and educational publications, and the Internet, including the Ph.D. Candidate's personal websites and weblogs.

These rights in no way restrict republication of the material by you or by others authorised by you.

**Signature of Research Subject**

**Date**

**Signature of Investigator**

**Date**

## **APPENDIX 2**

### **Questionnaire & Interview Protocol**

#### **Questionnaire Questions:**

PLEASE DESCRIBE THE INSPIRATION FOR, AND OBJECTIVES OF THE PROJECT(S). Things to keep in mind: Were you trying to solve a particular problem? Are you designing for a particular context? What are the main concepts that inform your project? What do you hope to learn, gain or produce in this project?

PLEASE DESCRIBE THE HISTORY AND CURRENT STATUS OF THE PROJECT(S). Things to keep in mind: How is this project supported or funded? What is the project timeline? What is your current status? When do you anticipate completing the project?

PLEASE DESCRIBE THE ANTICIPATED USERS AND CONTEXTS OF USE FOR THIS TECHNOLOGY. Things to keep in mind: How did you select the users and contexts of use? Were personas and/or user scenarios produced? Have these scenarios changed over time? Have you done any user testing?

PLEASE DESCRIBE THE CREATIVE PROCESS OR METHODS YOU USE IN YOUR WORK, AND HOW THAT RELATES TO OTHERS IN THE TEAM. Things to keep in mind: What activities do you do alone? What activities do you do with other members of the team? What products do you produce at each stage of the project? Do you document and archive your process? What do you do when you encounter obstacles? How do you make decisions?

PLEASE DESCRIBE WHAT YOU WOULD CONSIDER A DESIGN SUCCESS AND A DESIGN FAILURE. Things to keep in mind: What are your criteria for "good" design? What do you think contributes to "bad" design? Do these criteria change for the process and the product? How does user feedback influence your work?

PLEASE DESCRIBE WHAT YOU WOULD CONSIDER A TECHNOLOGICAL SUCCESS AND A TECHNOLOGICAL FAILURE. Things to keep in mind: What are your criteria for "good" technology? What do you think contributes to "bad" technology? Do these criteria change for the process and the product? How does user feedback influence your work?

PLEASE DESCRIBE WHAT YOU WOULD CONSIDER SUCCESSFUL USE, AS WELL AS MISUSE OR ABUSE OF THIS TECHNOLOGY BY USERS. Things to keep in mind: What are your criteria for "good" use? What do you think contributes to "bad" use? How do you approach the question or problem of unintended use? How much control of your design or product do you want the user to have?

PLEASE DESCRIBE HOW YOU THINK THIS AND RELATED TECHNOLOGIES MIGHT IMPACT OUR EXPERIENCE OF EVENTS, SPACES AND PLACES. Things to keep in mind: How is location important to this technology? What sorts of locational data does the technology collect? How is it stored? Do users have access to this data? What new relationships between people and spaces become possible? Which become

more difficult?

PLEASE DESCRIBE WHAT YOU THINK THE SOCIAL AND CULTURAL IMPLICATIONS OF THIS AND RELATED TECHNOLOGIES MIGHT BE, INCLUDING ADVANTAGES AND DISADVANTAGES. Things to keep in mind: How is collective action supported? How might this technology differentiate people? What are some possible risks? How should we address privacy issues? What are the creative potentials of this technology?

PLEASE FEEL FREE TO ADD ANYTHING ELSE YOU THINK IS RELEVANT AT THIS TIME.

### **Interview Introduction**

I will use this document to complete some of the context-related questions of the questionnaire. I can then verify how I have completed these questions during the interview. I should note, however, that not all parts of the protocol may be appropriate for each particular case. This also applies to any follow-up questions that I might need to ask, either to solicit a response that answers the questions more closely, or to clarify a response.

I expect one interview to last approximately 1-2 hours, depending upon how detailed the responses are, how many questions the respondent asks of me, and whether I need to complete human subjects assurances. I am responsible for ensuring compliance with applicable human subject regulations before proceeding, and without participant consent I may not proceed.

Italicized text indicates sample dialogue which will be read to the interviewee as needed to facilitate the flow of the interview. Comments in brackets [] are personal notes/reminders for the investigator.

### **Interview Introduction**

*My name is Anne Galloway. I am conducting research in my capacity as a Ph.D. Candidate in Sociology at Carleton University, and today I would like to ask you some questions about <name of project considered> as part of my dissertation research.*

*Please let me briefly explain to you the aims my project - Intimate and Playful Technologies: Ubiquitous Computing, Space and Culture. I am investigating emerging pervasive computing and its relations with space and culture. In other words, I am interested in how wireless and ubiquitous computing might impact everyday life in the city. As part of the larger project, I am conducting case studies of technology research and design projects in the UK and Sweden to better understand the social and cultural contexts of the research, design and use of emerging technologies.*

*Are there any questions I can answer for you at this moment about my project before I move on to talk about your involvement?*

[Wait for respondent to reply. If there are no questions, move on. If there are questions, try to address them or ask the participant to contact Rob Shields for more information.]

*Part of my research effort involves trying to identify what new technology researchers, designers and developers understand to be the social and cultural roles of wireless and ubiquitous computing in everyday urban life, and in particular, understandings of users and contexts of use. I am also interested in processes of technological innovation and creative and playful approaches taken by researchers, designers and developers in building new technologies. I have chosen a set of research and design projects to serve as case studies to help me explore these issues.*

*I have identified <name of project considered> as one of these case studies, and now I am conducting interviews with people who are familiar with <name of project considered> so that I can learn as much as possible about the project.*

*What I plan to do is to go through a series of questions with you about <name of project considered>. I would like you to try to answer me as fully as you can. Please don't worry if I ask you any questions that you do not know how to answer, although it would be helpful if you were able to indicate anyone else who might be able to answer them so that I might also talk to them. Also, I would welcome copies of any appropriate documentation related to the project that you think might assist my understanding.*

*I will be taking notes as you talk, but I would also like to use a digital recorder to help me with my note-taking and subsequent data analysis. Do you mind if I record our conversation?*

[Wait for respondent to reply. If he/she replies that they do not mind being recorded, move on. If she/he has questions about the purpose or subsequent use of the recording, explain that the recording is purely voluntary and that digital files will be kept strictly confidential and only used by me (the investigator). If she/he is not comfortable being recorded, say that is fine and move on. In that case, I will need to take much more detailed notes of the participant's responses.]

*Do you have any questions that I can answer for you at this point about how the case study will be conducted or what I will be asking you?*

*Once I have interviewed you, I will keep the data in a secure place and personally identifiable data will be coded for anonymity. All publications will maintain your confidentiality. Only I and my Ph.D. Committee will have access to these data.*

*Can I answer any other questions for you at this point?*

## **Human Subject Consent and Publication Permission for Interviews**

*Before we progress any further with this interview, I need to go over your rights and what you can expect from me as someone participating in this research study. I would like to reassure you that your participation is completely voluntary and that you have the right to withdraw from the case study at any point. I am now going to give you a human subjects consent form that outlines what I have just gone over with you. I would like you to take a few minutes to read it over, and then, if you don't have any questions, to sign it.*

[Give the participant the human subjects consent form and give him/her time to read it

over. Ask the participant if she/he has any questions. If no, ask him/her to sign the human subjects consent form, then set it aside in my folder for making a copy to return to the participant, and then file the original with other human subjects' clearances. If yes, try to address the questions. If the respondent is reluctant to sign, I will not be able to continue with the case study; thank the respondent for his or her time and conclude the interview.]

### **Identifying Information**

*I would now like to move ahead with the interview questions. I am just going to switch on the digital recorder and make sure it is working.*

*Today is <date> and we are at <location>. Could you please state your name, title and affiliation, as well as your position in the <name of project considered>?*

[Give the respondent time to respond, and ask for clarification if necessary. Thank them and inform them that interview questions will now follow.]

### **Interview Questions**

1. *PLEASE DESCRIBE THE INSPIRATION FOR, AND OBJECTIVES OF, <name of project considered>.*

[Give the respondent time to respond, and ask for clarification if necessary. Repeat for each question.]

2. *PLEASE DESCRIBE THE HISTORY AND CURRENT STATUS OF <name of project considered>.*
3. *PLEASE DESCRIBE THE ANTICIPATED USERS AND CONTEXTS OF USE FOR THIS TECHNOLOGY.*
4. *PLEASE DESCRIBE THE CREATIVE PROCESS OR METHODS YOU USE IN YOUR WORK, AND HOW THAT RELATES TO OTHERS IN THE TEAM.*
5. *PLEASE DESCRIBE WHAT YOU WOULD CONSIDER A DESIGN SUCCESS AND A DESIGN FAILURE.*
6. *PLEASE DESCRIBE WHAT YOU WOULD CONSIDER A TECHNOLOGICAL SUCCESS AND A TECHNOLOGICAL FAILURE.*
7. *PLEASE DESCRIBE WHAT YOU WOULD CONSIDER SUCCESSFUL USE, AS WELL AS MISUSE OR ABUSE OF THIS TECHNOLOGY BY USERS.*
8. *PLEASE DESCRIBE HOW YOU THINK THIS AND RELATED TECHNOLOGIES MIGHT IMPACT OUR EXPERIENCE OF EVENTS, SPACES AND PLACES.*
9. *PLEASE DESCRIBE WHAT YOU THINK THE SOCIAL AND CULTURAL IMPLICATIONS OF THIS AND RELATED TECHNOLOGIES MIGHT BE, INCLUDING ADVANTAGES AND DISADVANTAGES.]*
10. *IS THERE ANYTHING ELSE YOU WISH TO DISCUSS?*

[Give the respondent time to respond. If yes, discuss. If no, thank them for their participation and proceed.]

## **APPENDIX 3**

### **Cultural Probe Protocol**

*As part of my research, I would also like to leave small "cultural probes" with you to complete and return to me. The probes consist of a disposable camera and a set of postcards – and provide different ways for you to express yourself. I will leave the first postcard with you today, and the others will be mailed at weekly intervals.*

*Please share the camera amongst members of your project to take pictures of those aspects of everyday life you think are relevant to your research and design practice. For example, you could take pictures of things or places that inspire you or frustrate you, as well as contexts where you can imagine your technology in use. If you wish, you can also write down comments on your pictures on the paper provided.*

*After six weeks have passed, I ask that you please return the used camera to me. I will provide shipping details at a later date.*

*The second part of the probes is a set of postcards. Each pre-stamped postcard is sealed within an envelope. Please answer the questions on the back of the postcard and place in the post within one week of receipt. Each postcard is numbered and coded for anonymity. Please do not sign or include any identifying information on the postcards, as they will pass through the post.*

*Do you have any questions about the cameras or the postcards?*

[Give the respondent time to respond. If yes, discuss. If no, thank them for their participation and give them the cultural probes.]

### **Postcard Questions**

Participants will not be shown the postcards in advance. The questions below are included in this document for reference.

1. DESCRIBE THREE PLAYFUL THINGS YOU DID TODAY.
2. WHAT IS YOUR FAVOURITE PLACE IN THE CITY AND WHY?
3. DESCRIBE A DEVICE OR ARTEFACT YOU THINK IS WELL DESIGNED.
4. WHAT WERE THE THREE MOST BORING PARTS OF YOUR DAY?
5. IF YOU COULD DESIGN ANY TECHNOLOGY FOR YOUR NEIGHBOURHOOD, WHAT WOULD IT BE?

### **Conclusions**

*Thank you very much for your participation in the interview today, and your*

*continued participation in the cultural probes. Once I have completed the preliminary analysis of the interviews and cultural probes, I may contact you again with follow-up questions. Before I conclude our meeting, are there any questions or concerns you might have about this process and protocol?*

[Give the respondent time to respond. If yes, discuss. If no, thank them again and remind them that they may contact you at any time, and that they will be provided electronic copies of the results of the research when complete.]