

I. Title

Capital Metro Kiosk Interface Project

II. Co-Investigators

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III. Hypothesis, Research Questions and Goals of the Project

For this project we wish to implement a new method of relaying information to the Capital Metro bus-riding audience who have a need for immediate and accurate bus transit and route information. We feel that touch screen kiosks located at major Capital Metro bus interchanges can deliver both immediate information, such as traffics reports or bus delays, and be a mechanism for dynamic and interactive bus route scheduling. This new form of information access will complement the current paper, phone and Internet user interfaces that are traditionally accessed by traveling passengers. By creating an interactive system for bus riders at major bus interchanges, we wish to modify the way in which the average bus rider can request, receive and understand a variety of information pertaining to bus routes and other Capital Metro services. We would like to test the efficiency of creating an easy to use, interactive system that any general bus rider can intuitively understand. Furthermore, we intend to investigate the practicality and any difficulty of use that our proposed system may incur.

The goals of our project are:

- To create an interactive system in which a user can easily query, receive and understand pertinent Capital Metro bus route information.
- To create an interactive system that gives bus riders clear directions using simple language on how to access the correct information.
- To find out how a sample group of users perceives information relating to our bus kiosk terminology.
- To verify that our interactive system provides a benefit for Capital Metro riders that will complement the current use of paper, phone and Internet based systems for bus route and other Capital Metro information.

IV. Background and Significance

This section looks at some of the projects and previous research on kiosks implemented to aid public transportation systems. The majority of literature and research trends are project based and therefore this section will take a look at specific examples. These studies help support the argument in support of our prototype, and the future benefits it can allow. Specifically, we gathered statistics on the cost and use of kiosks in various cities as well as the potential benefits and risks for users.

According to the Distribution of Traveler Information Via Kiosks survey in 2004 from the Intelligent Transportation System's (ITS) Deployment Statistics, transit authorities in California, North Dakota, New York, North Carolina, Vermont, Delaware, Utah, South Dakota, Montana, and Colorado all provide public information kiosks for travelers. In 2005, ITS put out another survey and found that 17 major cities in the US use kiosks to provide real time transit schedules. Kiosks development in the public transportation sector is growing.

ITS did an evaluation of the kiosks in several cities including Phoenix and San Antonio. The Phoenix study put together a cost analysis on making and implementing kiosk designs. Phoenix hired a private contractor who "used an internet server to interface with the AZ Tech server and download traffic information and transit schedules to 28 kiosks located at commercial and public locations throughout Phoenix" (Zimmerman, 2000). These kiosks were supplied with a touch screen interface, an audio system and built-in printers. The total cost for initializing the system came to \$459,732 for 25 outdoor and three indoor kiosks (Zimmerman, 2000).

San Antonio, not unlike Austin, has had an increasing population and an increasing travel demand. The kiosks used by this city aim to "provide information on incidents and congestion on the freeway network, transit schedules and fares, as well as navigational assistance" (Carter, 2000). In this case a qualified expert indicated that "the devices had several functional problems and were unlikely to be used by travelers" (Carter, 2000). The study, however, did not elaborate further. While it is beneficial to be aware of all potential outcomes before delving too deep into a project, the report did not specifically detail what went wrong. We are still convinced that the proposed system would be greatly beneficial to users and stakeholders in Austin.

We looked into specific ways to improve kiosks for the user. The following two articles focused on improving a kiosk design for a user, whether it is for a commuter who wants a more personal experience interacting with the kiosk or for a disabled person who has different needs. Are kiosks conducive to personalized interaction, even within a communal space? Giovanni Cozzolongo et al. (n.d.) in the article "Supporting Personalized Interaction in Public Spaces" address creating a more personal experience for the user. The authors propose an architecture that supports using mobile devices to interact with public information systems such as kiosks. They focus on "the personal user-modeling agent that runs on the user mobile device and is able to exchange data with the environment in order to get personalized information" (Cozzolongo, n.d.). A second way to enhance the user's experience includes adding features to assist the disabled. John C. De Witt addresses disabilities and technology in his paper "The Role of Technology in Removing Barriers". His analysis provides examples on linking the two, so that a disabled person can "interpret the array of buttons and switches on a photocopy machine" or "read with the aid of large print, taped materials" (De Witt, 1991). By taking these two examples into consideration, we hope to emulate the user focus that they describe.

V. Research Method, Design and Proposed Statistical Analysis

For the Capital Metro Kiosk Interface Project there are two main types of research that will be conducted: Card Sorting and Usability Testing.

The purpose of Card Sorting is to gain insight into how the evaluator understands the terminology that will be used. Since we do not have a previously built model to work with, we feel that Card Sorting would be a good method to use to help us determine how to lay out our interface. In order to conduct Card Sorting, we will first come up with a list of 50-60 terms that are related to the kiosk interface we hope to develop, such as "Bus Routes," "Start Over," and "Help." We will then print each term onto an individual note card. Each co-investigator will be given an identical stack of cards and a Card Sorting script.¹ Evaluators will be asked to sort the cards into piles according to what makes sense to them, and then to place a yellow Post-It on what they do not understand. After the cards are sorted into piles, users will be asked to label the piles with a blue Post-It note. They will then be asked if they can group the piles together without moving any cards, and if possible label the super-group with a pink Post-It note. They will then be asked if they can create any larger groups and label them with green Post-It notes.

In order to analyze the card sorting data, the results of the experiments will be input into a spreadsheet and then entered into IBM's EZSort. Using cluster analysis, EZSort will produce a chart of how the terms were grouped by the evaluators. The closer the joining lines are to zero, the greater the correlation of the terms. This data will be used to construct the menus and submenus for our kiosk's interface, so that the touch screen information is grouped in ways that are both intuitive and sensible for the user.

After a basic interface prototype has been created, we will conduct task-based Usability Tests to determine our prototype's usability. When a user comes to test the system, they will first be given a pre-test questionnaire² and a basic introduction to the system.³ Then they will be asked to complete a set of tasks while giving commentary on what they are doing. Because we hope to develop a deep and narrow prototype, we will give the evaluator 6 specific tasks to test, instead of letting them blindly explore the system. These tasks will range from simple goals, such as "From the Start screen click on the 'About' link" to "Find out what bus to take to get from 1912 Speedway to 24th and Rio Grande." The tasks will be divided into pairs based on difficulty. Before the testing starts, evaluators will be randomly placed into two separate groups, although each person will be given the usability tests individually. Both groups will be given alternating tasks from each difficulty level and tasks will always progress from easier to harder. During this time, the evaluator will be video taped and an interviewer will observe them and take notes. Simultaneously their touch clicks and touch click paths will be recorded and logged. After they have completed the tasks, the investigator will

¹ See Appendix A

² See Appendix D

³ See Appendix B

give them a post-questionnaire⁴ and also conduct a follow-up interview to get the user's reactions to the prototype.

To analyze the Usability Testing, we plan on using a mix of quantitative and qualitative measures. For quantitative measures, we will analyze at the touch click logs to see what sort of patterns emerge for the tasks, in terms of how easy or hard it was to complete the task. We will run ANOVA tests on the data from both the click logs and the post-questionnaires from the two groups of evaluators to determine how great of a learning curve the individual tasks and the system as a whole could potentially have. We will reject the null hypothesis if our data is .05 statistically significant. For qualitative measures, we will examine the evaluators' comments and non-verbal expressions, the interviewer's notes, and open-ended questions on the post-questionnaire to determine the users' feelings of success or difficulty while interacting with the prototype. We will code the reactions based on a Likert scale of 1 to 7 in order to see where the evaluators were having positive or negative reactions to the prototype. We hope to use these combinations of methods to determine what parts of our prototype worked or didn't work and what the users liked or didn't like. Based on this data, we will then be able to revise our kiosk interface prototype to make it more user-friendly.

VI. Human Subject Interaction

A. Sources of Potential Participants

Sources for potential participants for kiosk testing and design implementation include all commuters on Capital Metro, who live in the city of Austin, and who do not work for Capital Metro or who are not in our Users class.

Capital Metro is a resource for the community and so their records are publicly accessible. A large amount of our demographic data has been acquired through research into Capital Metro's 2005 Origin and Destination study. Creative Consumer Research was hired to gather the data for this survey (Capital Metro, 2005). They collected 20,449 surveys from October 5th through November 5th, 2005 and from November 29th through December 10th. They based the sampling plan on a 90% confidence level with a 5% margin for error.

Some of the demographic data that Capital Metro found includes: about 50% of riders pay the adult fare; 37% pay the student fare; 9% either pay the senior rate, disabled rate, or refused to say. 80% of the population prefers to speak English at home and 11% speak Spanish. 38% of the riding population are white/Anglo Saxon; 28% are Hispanic; 19% are African American; 8% are Asian; 7% are either Native American, refused to say, or describe him or herself as other. The largest group of participants in the demographic study (35%) has lived in Austin for 7 or more years. The most common origins and destinations were "home" and "College/University". The majority of riders (61%) were between the ages of 19-25. Based on these demographics, we regard anyone in Austin who rides the bus, except for those who work for Capital Metro or those who are in our Users class, to be a potential

⁴ See Appendix E

participant in this study. We do not believe that any of these potential participants are vulnerable to coercion or undue influence.

B. Procedures for the recruitment of the participants

The users who will be selected to take part in Card Sorting will be from a pool of friends and family who fit the criteria outlined in the section above. No formal appointment or skill will be necessary which can result in impromptu and quick interviews. There will be no prescreening. We will not employ the use of fliers, newspapers, or radio advertisements.

The recruitment procedure for evaluators for Usability Testing will also be selected from a pool of friends and family, as well as from a call to those on the UT iSchool mailing list. Evaluators will be screened to make sure they fit our requirements.

C. Procedure for obtaining informed consent

Investigators who conduct Card Sorting testing will not ask evaluators for written consent. The subjects will be told before testing begins that they have the right to stop at any point during the interview and they are not obligated to finish the task.

Due to being video taped, we will ask for written consent of the evaluators for the Usability Testing of the kiosk interface prototype. Users will be informed prior to testing that they have the right to stop the interview at any time during the testing and that they are not obligated to complete the task.

D. Research Protocol

Card Sorting Interview	15 -25 mins. Total
1. Check-in, introduction	2 mins.
2. Instructions	1 mins.
3. Card Sorting Exercise	10-20 mins.
4. Wrap up & Thank you	2 mins

Users will be introduced to Card Sorting by a prepared script⁵ that explains the tasks of the activity. The researcher will read aloud the script and explain the user's ability to stop the session at any time. The researcher will explain how it is not possible to answer incorrectly, and any results from the task will not be judged against the user and will only be used for internal research. No identifiable information will be collected in this Card Sorting.

Users will be asked to sort a deck of labeled note cards according to groups that make sense to them. Next, they will be asked to label the groups, if possible, with yellow Post-It notes and rubber band them together. Evaluators will be advised that not every group necessarily needed a label. The next step involves having subjects

⁵ See Appendix A

organize the first set of groups into larger groups without moving any cards from one group to another. Lastly, they will be asked to label the larger and newly created groupings with pink Post-It notes. The new groups will be gathered together with a rubber band.

Card Sorting can take place in various settings – the only requirements being a tabletop or flat surface and a distraction-free environment. The investigation takes about 15-25 minutes. The data to be collected will be the correlations the user makes between terms and what they understand the terms to mean.

Upon concluding the Card Sorting activity, the researcher will retain the card groups in their original state for later processing. The researcher will end the Card Sorting by thanking the user.

Usability Testing Interview	50-55 mins. Total
1. Check-in, introduction	3 mins.
2. Consent form, warm-up	3 mins.
3. Pre-Questionnaire	5 mins.
3. Instructions	1 min.
4. Usability Testing	30 mins.
5. Post-Questionnaire	5 mins.
6. Wrap up & Thank you	2 mins.

Upon arriving to their interview users will check in. A researcher will greet them and will give them an overview of what will occur during the interview.⁶ They will then present the evaluator with a consent form.⁷ This consent form contains the guidelines, expectations, and contact information for the participant's use. If requested, the researcher will read aloud the content of the consent form. The user will retain a copy of the form for their files. This consent form will outline the participant's right to stop or leave the study at anytime without explanation. The researcher will explain how the user can ask questions at anytime. The user will also be informed that all answers are kept confidential.

Following the user's expressed consent to participate in this usability study they will be presented with a pre-test questionnaire.⁸ This questionnaire should take no more than 5 minutes. This questionnaire will gather demographic information about the user.

Just prior to the Usability Testing researchers will introduce the users to the prototype. The researcher will reiterate to the user that there are no definite right or wrong answers. The user will be told that if anything seems broken or wrong or

⁶ See Appendix B

⁷ See Appendix D

⁸ See Appendix C

weird or confusing it is not their fault. The user will be asked to “think aloud,” explaining his or her actions as they are performed to the researcher.

Usability Test evaluators will be asked to perform specific tasks such as finding bus route information, time schedules, and drop down menu searches on the prototype interface. We will not be testing the evaluators but are asking them to evaluate the system, and noting their reactions. We will examine the ease or complexity of these tasks. We will note the evaluator’s step-by-step description of their task.

Videotaping is necessary to maintain accurate records of the interview. Videotaping allows for all information to be recorded including information that researchers can fail to notice or misinterpret. The testing will be conducted in the School of Information’s IX Lab, and if the Lab is not available then an alternative location will be found. Usability testing is expected to take 1 hour.

Immediately following the conclusion of the Usability Test the evaluator will be asked to fill out a post-test questionnaire.⁹ This questionnaire will ask the user to rate their experience. The questionnaire contains 14 statements to be rated on a Likert scale and 3 open-ended questions. The open-ended questions will probe the users’ emotional reactions to the interface.

The user will then be thanked for their time and given refreshments.

E. Privacy and confidentiality of participants

In both Card Sorting and Usability Testing evaluators will be kept anonymous. They will be referred to as Participant 1, Participant 2, etc. To ensure privacy each interview will be conducted one at a time. Also, interviews and testing will be scheduled so that there is no overlapping time where evaluators might see each other, either coming or going. Every attempt will be taken to ensure evaluators’ privacy; research material will be destroyed after it is no longer needed. Also, investigators will refrain from referring to any users’ real names, and all pronouns will be gender neutral in any discussion or literature.

F. Confidentiality of research data

All data collected during Card Sorting and Usability Testing, including logs, digital video tapes and interview notes, will be stored in a locked cabinet in the home office of co-investigator Martha Horan. Any media that may impede on an evaluator's anonymity will only be used for internal use and not be made public. The individual responses will be kept confidential and only viewed by members of this team. Aggregate information will not contain any traces of individuality. After the notes and videos are no longer needed we will burn them.

⁹ See Appendix E

G. Resources

The research resources needed for Card Sorting are: the four co-investigators; labels; note cards; Post-It notes; rubber bands; a printer, a computer running Microsoft Office; and a computer running EZSort. The labels, note cards, Post-It notes, and rubber bands can be acquired from a local office supply store for about \$20. There is an available computer running Microsoft Office and a printer that we can use at the School of Information's IT Lab. EZSort is freely downloadable software that is already installed on one of our investigator's home computer. The advantage of Card Sorting is that it takes about 15-25 minutes per evaluator and the experiment can be conducted anywhere where there is a large table or even a floor on which to spread out the cards. Therefore, each investigator can ask users within the target audience to participate in the Card Sorting experiment whenever they are in a situation that will allow them to do so, without needing to be in a controlled environment or scheduling a time for the experiment to be run.

The research resources needed for Usability Testing are: the four co-investigators; a lab; a computer with a touch screen to run the prototype of the kiosk interface; click tracking software on the same computer; a digital video camera (possibly 2); and notebooks. We plan to use the School of Information's IX Lab, which is already set up for Usability Testing. It contains a computer with the Moray tracking software on it and a video camera, which records the participants as they perform the tasks. However, if we are not able to set up the IX Lab with a touch screen (real or simulated through use of a tablet PC), then we will need a quiet room or empty classroom to set up our touch screen and video equipment. In this case, a video camera and a tripod can be borrowed from the IT Lab. We expect each experiment to take approximately 1 hour. Evaluators will be compensated for their time with refreshments.

VII. Potential Risks

Card Sorting will have a low degree of risk due to the randomized sampling technique of our broad user base. No identifiable information is required to perform this task. The investigator will read to each user a prepared script outlining the procedures and explain that there are no wrong answers and that he or she has the right to end the session at any time without explanation.

Usability Testing will have a high risk of violating a user's privacy. This prototype will record and log measurable data including: objects clicked on, time spent completing a task, and so on. These statistics have a low degree of risk associated with them since there is no identifiable information recorded. Video recordings will be made of each Usability Testing session to record user comments and any non-verbal communication exhibited. These recordings have high risk of violating the participant's anonymity if made publicly available. This risk can be minimized by restricting its accessibility to members of our team and by keeping the recordings in a secure location.

The information provided to the evaluators in the Usability Testing will be information that may be incomplete or inadvertently wrong. Participants will be debriefed after their session to remind them of the nature of the Usability Test, and to not accept the information received from the prototype as completely factual. We wish to reduce any risk of the participant using wrong information gained from our prototype. The information received from Capital Metro has a low degree of risk. Capital Metro has provided materials to our team as per their policy on free public access. Our use of their materials will not pose any legal problems.

VIII. Potential Benefits

We believe that the benefits for this project outweigh the risks. Benefits for our design include a more user-friendly bus information system. Users will no longer have to rely on only the website or the printed route maps. These information sources do not always provide the geographic context and they don't always list all the stops on the routes. However, kiosks located at major bus stops will provide a greater access to more thorough information. The users could see not only bus times and schedules, but also whether they missed a bus, which bus it was, and when the next one will come. Evaluators could use the trip planner to find out traffic updates and print a detailed route map. Risks to the city of Austin are minimal, and after the initial set-up fees, costs would mostly pertain to regular maintenance.

IX. Sites or agencies involved in the research project

Misty Whited, a Public Relations specialist from Capital Metro, provided our team with the results of an internal study, which depicts the demographics of Capital Metro customers. She is our liaison within Capital Metro and released this information as per their policy on public information. Mr. Van Sutherland, GIS Coordinator for the Capital Metro Transportation Authority, provided our team access to Capital Metro GIS (Graphic Information System) data, on bus routes, bus stops, and coverage as per their policy on public information.

X. Review by another IRB

N/A

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Appendix A

Card Sorting Script

Before

Thank you for agreeing to help us with this simple test. In a moment I will give you a stack of cards with words or phrases on them that relate to looking up information about a bus transportation system. Please sort them into piles that make sense to you. Take as much time as you need. Try to organize all the cards, but not every card needs to belong to a group. Just go with what your instincts tell you. There is no right or wrong in this and no one will ask you to explain yourself.

If you are not sure of the meaning of a word or phrase on a card, please place one of the yellow Post-It notes on it. Feel free to write something on the Post-It note if you wish to. Whether you choose to then place it in one of the piles is up to you.

If at any point you become uncomfortable, please inform me that you would like to stop and we will end the test, no questions asked.

After sorting is complete

If you can, please label the different groups you have created, if you can, with these blue note cards and rubber band the group together. Not every group needs a label, so don't worry if you can't come up with one. Again, there is no right or wrong answer.

After labeling is complete

If you can, organize the groups of cards into larger groups without moving any cards, and label them with these pink note cards. There is no right or wrong way to do this and it's okay if not every group can be grouped with other ones.

If more than two pink groups are identified

Once again, if you can, organize the groups of cards into larger groups without moving any cards, and label them with these green note cards. There is no right or wrong way to do this and it's okay if not every group can be grouped with other ones.

The wrap up

Thank you so much for helping us with this.

Appendix B

Usability Testing Script

Before

Thank you for helping us evaluate the Capital Metro Kiosk Interface. The evaluation should take about an hour. We are going to be videotaping what happens here today, but the video is for analysis only. It will only be seen by members of the development team.

We'd like you to help us with the interface that we're developing. It's designed for people like you, so we'd like to know what works and what doesn't. We're still at an early stage of development, so not everything you're going to see will work right. Some parts may not even work at all.

Here's how the session will work: first I will give you a pre-evaluation questionnaire, which is mostly for us to learn some basic demographic information about you. Then I will show you the system and give you several tasks to complete. We'll wrap up, I'll give you a post-evaluation questionnaire and then we're done.

Do you have any questions at this point?

Statement of Informed Consent

Before we get started, I'd like to read to you what's called a statement of informed consent. It's a standard thing which sets out your rights as a person who's participating in this kind of research.

You may stop at any time
You may ask questions at any time
You may leave at any time
Your answers are kept confidential.

Please review this consent form and sign at the bottom.
Gives participant consent form.

Do you have any questions about that?

Pre-test questionnaire

Now, please take a few minutes to complete this questionnaire.
Gives the participant the questionnaire

Testing set-up

In a moment I'll show you the kiosk interface, but first let me give you some instructions about how to approach it.

The most important thing to remember when you're using it is that you're testing the interface, the interface is not testing you. There is nothing you can do wrong. If anything seems broken or wrong or weird or confusing, it's not your fault. If at any point you get stuck and can't figure out how to complete the task, you are free to stop and move on to the next one.

As you do the tasks I need you to think out loud so that I can understand and follow what you are doing. Let me show you what I mean by thinking out loud.

Researcher will demonstrate the "think aloud" process

That's the thinking aloud process. After each task, I'd like you to provide any comments or feedback about that task. Please remember that I am equally interested in what you like about the prototype, and what you don't like, or don't find easy to use. During the course of the session you can ask me questions. I'll answer as many as I can, but in some cases I may have to defer because we're interested in finding out what you think about the interface.

Do you have any questions before we begin?

Introduction to the kiosk

This is a prototype for the Capital Metro Kiosk Interface. While you are using this interface, please pretend that you are at a Capital Metro bus stop. Here is a list of tasks for you to do while you are at the kiosk. Please remember that if at any point you get stuck and can't figure out how to complete the task, you are free to stop and move on to the next one.

Gives participant the lists of tasks and observes as they complete them.

Wrap-up and post-test questionnaire

Thank you for your participation today. We would like to take this chance and ask you about your experience. This questionnaire should not take more than 5 minutes. Your honesty is appreciated.

Thank you for your time. Please partake of these refreshments.

Appendix C Consent Form

You are being asked to participate in a research study. This form provides you with information about the study. The person in charge of this research will also describe this study to you and answer all of your questions. Please read the information below and ask any questions you might have before deciding whether or not to take part. Your participation is entirely voluntary. You can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time and your refusal will not impact current or future relationships with UT Austin or participating sites. To do so simply tell the researcher you wish to stop participation. The researcher will provide you with a copy of this consent for your records.

The purpose of this study is to find out how a sample group of evaluators perceive information relating to our interactive system.

If you agree to be in this study, we will ask you to do the following things:

- Answer a questionnaire at the introduction of the testing
- Perform specific tasks on the prototype interface
- Answer a questionnaire at the conclusion of the testing.

Total estimated time to participate in study is about 1 hour.

Risks of being in the study.

This prototype will record and log measurable data including: objects clicked on, time spent completing a task, and so on. These statistics have a low degree of risk associated with them since there is no identifiable information recorded. Video or audio recordings will be made of each Usability Testing session to record user comments, and any non-verbal communication exhibited. These recordings have high risk of violating the participant's anonymity if made publicly available. This risk will be minimized by restricting its accessibility to members of our study, and by keeping the recordings in a secure location.

Benefits of being in the study are contributing to the development of an interactive system that will better serve the community of bus riders, and will help researchers evaluate the design of our prototype.

Compensation:

Subjects will be compensated with refreshments.

Confidentiality and Privacy Protections:

The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

The records of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin, members of the Institutional Review Board, and (study sponsors, if any) have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

Contacts and Questions:

If you have any questions about the study please ask now. If you have questions later, want additional information, or wish to withdraw your participation call the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871 or email: orsc@uts.cc.utexas.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information and have sufficient information to make a decision about participating in this study. I consent to participate in the study.

Signature: _____ Date: _____

Signature of Investigator: _____ Date: _____

Appendix D

Capital Metro Kiosk Interface Pre-Testing Questionnaire

Part 1: Riding the bus and knowledge of Austin

1. How often do you ride the Austin public bus system, Capital Metro (check one)?
 - A few times a week
 - A few times a month
 - Rarely / Only when I have to

2. Why do you ride the bus (check all that apply)?

- Environment support
- Convenience
- Necessity
- Other _____

3. How would you rate your knowledge of the Capital Metro bus routes that you ride **frequently** (circle one)?

I don't know them that well

1 2 3 4 5

I know them very well

4. How would you rate your knowledge of the Capital Metro bus routes that you **never** ride or ride **infrequently** (circle one)?

I don't know them that well

1 2 3 4 5

I know them very well

5. How would you rate your knowledge of Austin's city layout (circle one)?

I don't know Austin that well

1 2 3 4 5

I know Austin very well

Part 2: Finding out bus route and schedule information

6. Do you use, or have you used, the Capital Metro Web site (www.capmetro.org) to find schedules and maps (check one)?
 - Yes
 - No

7. Do you use, or have you used, the Trip Planner tool on the Capital Metro Web site (check one)?
- Yes
 - No
8. Do you use, or have you used, the automated Capital Metro route information telephone number (“GO Line” 512-474-1200) (check one)?
- Yes
 - No

9. If yes, how would you rate each of the above services' ease of use (circle one)?

Service	Easy to use					Difficult to use				
Capital Metro Web Site	1	2	3	4	5					
Trip Planner	1	2	3	4	5					
Go Line	1	2	3	4	5					

Part 3: Demographic information

10. What is your age range (check one)?

- Under 18
- 18-24
- 25-35
- 36-55
- 56 +

11. Which best describes your status (check all that apply)?

- Employed
- Student
- Retired
- Other _____

12. How long have you lived in Austin (check one)?

- Less than 6mos
- 6mos – 1year
- 2-5years
- 6-10years
- 10+years

Appendix E

Capital Metro Kiosk Interface Post-Testing Questionnaire

		disagree strongly				agree		strongly
The kiosk interface is attractive.	1	2	3	4	5	6	7	
The kiosk's graphics are pleasing.	1	2	3	4	5	6	7	
The interface has a good balance of graphics versus text.	1	2	3	4	5	6	7	
The kiosk's content makes me want to explore the interface further.	1	2	3	4	5	6	7	
It is easy to find one's way around the interface.	1	2	3	4	5	6	7	
You can get to information quickly.	1	2	3	4	5	6	7	
It is easy to remember where to find things.	1	2	3	4	5	6	7	
Information is layered effectively on different screens.	1	2	3	4	5	6	7	
Information is easy to read.	1	2	3	4	5	6	7	
Information is relevant.	1	2	3	4	5	6	7	
The kiosk is designed with me in mind.	1	2	3	4	5	6	7	
The kiosk reflects progressive, leading edge design.	1	2	3	4	5	6	7	
The kiosk has a clear purpose.	1	2	3	4	5	6	7	
Mistakes are easy to correct.	1	2	3	4	5	6	7	

Could you describe some of your initial reactions to the kiosk interface?

Would you make any changes? If so, what would they be?

Is this an interesting service? Is it something you would use? Why or why not?
