

# Research Proposal

## I. Title

Fogo Data Centers Usability Evaluation

## II. Investigators (co-investigators)

The primary investigator of this study is Randolph Bias. The co-investigator is Sara Snow.

## III. Hypothesis, Research Questions, or Goals of the Project

Fogo Data Centers (Fogo) has two goals for their website: to gain confidence by establishing credibility and to convert site traffic and interest into a lead or sale. In order to meet these goals, Fogo wants to use their site to inform and educate potential clients and provide engaging interaction through graphically advanced forms and calls to action.

Correspondingly, the goals for this research are to test the general sense of ease of navigation and organization of information on the Fogo website, garner feedback from test participants about their confidence in Fogo as a credible and reliable company through the use of their site, and offer suggestions for site redesign.

## IV. Background and Significance

There is no relevant background literature specific to Fogo Data Centers or the design of data center websites. There is, however, a relevant literature and industry best practice for the usability of websites in general. Because Fogo Data Centers wants to improve overall user satisfaction of their website and increase traffic and interest in their website and company, the Director of Marketing is eager to collect quantitative and qualitative data on the usability of the site.

## V. Research Method, Design, and Proposed Statistical Analysis

The research design comprises three sections: a task completion, a post-task questionnaire, and a semi-structured interview. The task completion will test the goals of the website through observation of each participant's completion of the tasks. The post-task questionnaire and semi-structured interview will capture participant's overall impressions of the site.

The tasks were derived from test scenarios developed from use cases and with the assistance of Fogo Data Centers Director of Marketing. Due to the range and extent of information and functionality of the website and the short time for which each participant will be available, the tasks are the most common and relatively complex of available functions. The tasks are identical for all participants of a given user role in the study.

The design allows for the collection of both quantitative and qualitative data collection. Quantitative data collected includes the percentage of participants who complete each task successfully and the number of tasks participants were not able to complete successfully. Qualitative data collected includes the evaluation and analysis of the participants' behavior and comments during the task-based portion of the test, as well as of their responses to the semi-structured interview.

## VI. Human Subject Interactions

### A. Sources of potential participants

Fogo's Director of Marketing identified two types of website users: the baby boomers, and the internal/external information technology (IT) "guys." The baby boomers are

high-level employees of companies wanting to use Fogo's data center space. They do not fully understand data centers, but know—often from Microsoft commercials—that they need to investigate data center options. (For the purposes of this research, they will be identified as User Group 1, “Baby Boomers.”) The internal/external IT users are “Generation X and Y” employees who are tech-savvy and typically Google Chrome users. (For the purposes of this research, they will be identified as User Group 2, “IT Guys.”) Both types of users frequently visit the Fogo website, but the number of users are heavily weighted on the IT user. Both types of users are generally male.

Potential participants, then, will be representative of these two user groups. There will be an anticipated eight participants for this study, with at least half being IT users.

None of the participants are likely to be vulnerable to coercion or undue influence, and there will be no use of special classes of participants whose ability to give voluntary informed consent may be in question.

Human subject involvement in this project is expected to begin in April 2012. It is expected to end by the first week of May. Additionally, it is expected that each participant will be tested for no longer than one hour.

**B. Procedures for the recruitment of the participants**

Participants are a convenience sample within the demographic that are selected from the acquaintances and friends of the co-investigator.

**C. Procedure for obtaining informed consent**

Participants will be asked to give consent, and their participation in the study will indicate that. See Appendix A: Consent for Participation in Research.

**D. Research Protocol**

Each test session will be conducted in either the UT School of Information User Experience Lab, using the lab's desktop computer. Sessions will last between 45 minutes and one hour. The co-investigator will administer the test and observe the participants' interaction with the website, prompting each participant to “think aloud,” but otherwise offering no clues or suggestions as to how to complete the tasks during the task completion portion of the test.

During the test session, the co-investigator will read aloud the informed consent and will prompt the participant for any questions. The participant will indicate consent for participation in research by beginning the task completion portion of the test. (See Appendix A: Consent for Participation in Research.)

The participant will then be shown the Fogo Data Centers website, and the co-investigator will read aloud the first of six tasks. The participant will be instructed to begin and to “think aloud” as he or she moves through the site to complete the task. The co-investigator will encourage the participant to think aloud or will ask the participant follow-up questions as unobtrusively as possible while taking observation notes. Each of the five subsequent tasks will be completed in the same manner. (See Appendix B: Task Questions for User Group 1, “Baby Boomers” and Appendix C: Task Questions for User Group 2, “IT Guys.”)

After the tasks are completed or the co-investigator ends the session, the participant will complete a post-task questionnaire and a semi-structured interview. Features being

evaluated are general ease-of-use of the website, overall impressions, likes and dislikes, and recommendations for improvement. (See Appendix D: Post-Task Questionnaire and Appendix E: Semi-Structured Interview.)

**E. Privacy and confidentiality of participants**

Privacy: All participation will be voluntary. No person will be required to participate, and if they wish to withdraw from the test or request that their data not be used, they may. The sessions will be conducted in the UT School of Information User Experience Lab to ensure the usability evaluation will not be accessible by unrelated personnel.

Confidentiality: Participants will be assured of the confidentiality of their responses. No identifying information will connect their test responses to themselves; their data will be used to report group trends only.

**F. Confidentiality of the research data**

During the test observation and post-test questionnaire, the co-investigator will take notes on paper, but will not include any identifying information within the notes. No identifying information will be asked for or included in any portion of the test.

When the study is complete, all questionnaires and observation notes will be disposed of.

**G. Research resources**

The study will utilize the UT School of Information User Experience Lab to administer the test. The co-investigator will use a personal computer to collect, aggregate and store data among one another. The entire test for each participant will take no more than one hour, and the study as a whole will be conducted within approximately one month from start to finish, between April 2 to April 30, 2012.

Surveys and Interviews will be conducted at the School of Information, located just south of the University of Texas main campus. The university provides resources such as psychological care, various support services, and basic medical care. Additionally, Breckenridge Hospital is located at 601 15th Street, at the corner of Hospital Drive, only blocks from the UT School of Information.

**VII. Potential risks**

The research study does not include any foreseeable risks greater than those of everyday life.

Participants will be assured of the confidentiality of their responses. Their data will be used to report group trends only, and they are not obliged to participate in any part of the study and may refuse to answer any questions. Participants can quit the study at any time.

**VIII. Potential benefits**

The research study will help Fogo Data Centers determine the usability of their website and help them improve the site based on the data gathered during each usability test.

There are no benefits expected for the participants.

**IX. Sites or agencies involved in the research project**

N/A

**X. Review by another IRB**

N/A

## **Appendix A: Consent for Participation in Research**

### **Overview**

The purpose of this research is to examine the usability of the Fogo Data Centers website (<http://www.fogodatacenters.com/company/about-us/>). During this test, you will serve as an evaluator of the website by completing a set of tasks. These include an observation of your actions in carrying out several predefined tasks, followed by a post-task questionnaire and semi-structured interview. My goal is to gauge how easy or difficult you find the site to use. I will record your reactions and opinions and encourage you to think aloud while you complete each task. I may ask you to clarify statements you make.

### **Things to Keep in Mind**

Here are some things you should know about your participation:

- This is not a test of you. I am testing the design and ease-of-use of the website.
- Don't worry about making mistakes. There is no right or wrong answer.
- If you ever feel that you are lost or cannot complete a task with the information you have been given, please let me know. I'll ask you what you might do in a real-world setting and then either guide you on the right track or move you on to the next task.
- This test will take approximately one hour of your time, and you will not be compensated.

### **Risks/Benefits/Confidentiality of Data**

There are no known risks. There will be no costs for participating, nor will you benefit from participating. Your name and email address will not be kept during the data collection phase. A limited number of research team members will have access to the data during data collection.

### **Participation or Withdrawal**

Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Withdrawal will not affect your relationship with The University of Texas in anyway. If you do not want to participate either simply stop participating or close the browser window.

### **Contacts**

If you have any questions about the study, contact the researcher Sara Snow at 770-301-3287 or send an email to [sawasnow@gmail.com](mailto:sawasnow@gmail.com). This study has been reviewed by The University of Texas at Austin Institutional Review Board and the study number is [STUDY NUMBER].

### **Questions about your rights as a research participant.**

If you have questions about your rights or are dissatisfied at any time with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or e-mail at [orsc@uts.cc.utexas.edu](mailto:orsc@uts.cc.utexas.edu).

Do you have any questions before beginning the test?

Your participation in this test indicates that you received information about the study and have given your consent to participate.

Thank you.

**Appendix B: Task Questions for User Group 1, “Baby Boomers”**

1. What product or service does Fogo Data Centers offer?
2. What is colocation?
3. Request general information about Fogo.
4. Find information on how Fogo partners with Power Schools.
5. What measures does Fogo use to recover from disasters?
6. Where are Fogo’s data centers?

### **Appendix C: Task Questions for User Group 2, “IT Guys”**

1. What product or service does Fogo sell?
2. What are three technical specifications (specs) of Fogo’s data centers?
3. Request a quote for colocation.
4. Find information on how Fogo partners with Power Schools.
5. What measures does Fogo use to recover from disasters?
6. Where are Fogo’s data centers?

### Appendix D: Post-Task Questionnaire

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
It is apparent from the homepage what the purpose of the website is.				
The language of the website (i.e., link labels and content) is clear and easy to understand.				
Information on the website is easy to find.				
The site is well-suited to first-time visitors.				
The site is well-suited to repeat visitors.				
The website presents information in an aesthetically pleasing manner.				
The layout and design makes me want to explore the site more.				
The content would keep me coming back to visit the site.				
Fogo is a credible and reliable company.				

## **Appendix E: Semi-Structured Interview**

1. What are your overall impressions of the site? What do you like or dislike?
2. If you could make one significant change to the website, what change would you make?
3. Would you recommend Fogo Data Centers to a colleague or friend?