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Executive Summary

This report delivers the findings and recommendations resulting from a usability study conducted by the Hufflepuff Team. We were engaged by IEEE and ASME to evaluate the usability of their website, Engineeringforchange.org (E4C). Under the guidance of our instructor, Dr. Carol Barnum, our team consists of three Information Design and Communication (IDC) graduate students and one IDC undergraduate student at Southern Polytechnic State University (SPSU) in Marietta, Georgia.

Purpose

We conducted the usability evaluation to understand users’ experience on the E4C website and to learn what worked well for them and what needed improvement. Our goal was to observe, document, analyze, and provide recommendations for improving the site’s usability in order to increase E4C membership. We evaluated the following tasks:

- Describing the purpose of the site.
- Registering as a new user to determine if participants can successfully navigate the login name and password requirements.
- Searching for a specific member and a workspace.
- Joining a workspace.
- Using the site’s top-level navigation to find the Solutions Library.

Process

Prior to our formal evaluation, we met with the project sponsors to identify goals and objectives, created personas of the typical E4C users, conducted a heuristic evaluation, and designed a test plan. We conducted the usability evaluation in the SPSU student usability lab between November 1 and November 6, 2011. We chose six test participants (using the first as a test or pilot participant) who possessed similar professional characteristics as our personas.
Executive Summary (continued)

Findings

Positive elements
Key positive findings from the usability test:
- All participants were able to find a specific E4C member using the search function.
- Three of five participants were able to identify the workspaces a member is involved with on a member profile page.
- All participants commented positively on the look of the E4C website.
- Despite showing and voicing difficulties with the E4C website, all participants expressed an interest in returning to the site.

Problematic elements
Tables 1, 2, and 3 contain the problematic issues we found during the usability evaluation along with our recommendations for correcting the problem. The tables are organized by issue severity ranking. There is one table for each ranking, defined as follows:
- **Catastrophic issues**: Prohibits users from performing their given task and requires an immediate modification
- **Major issues**: Frustrates or confuses users and requires repair as soon as possible
- **Minor issues**: Hinders the users’ ability to navigate and should be fixed when possible
### Table 1. Catastrophic Issues

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| 1. All participants were unable to determine the purpose of the website and actions they could take on the website after their first viewing of the home page. | • The current mission statement is long and difficult to read. Create a concise, and prominent mission statement on the home page.  
• Use more meaningful pictures that show engineering projects in order to visually communicate the mission statement.  
• Ensure all images relate to their corresponding text.  
• Change the sliding/hidden menu so that all major links are visible at once.  
• Rename primary links to communication actions that can be taken on the E4C website. |
| 2. All participants are not aware of the sliding/hidden top menu. This feature makes navigation very difficult. | • Change the sliding/hidden menu so that all major links are visible at once. |
| 3. Three of the five participants did not know to click “Help Solve this Challenge” to join a workspace and were unable to complete the task. | • Consider renaming button to “Join this workspace” or “Work on this project.”  
• Conduct a card sort to determine the most meaningful button name. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| 4. All participants were unable to recognize the difference between Workspaces and Solutions Library. | • Change the sliding/hidden menu so that all major links are visible at once.  
• Evaluate link names and conduct a card sort to determine the most meaningful link names.  
• Consider renaming “Solutions Library” to “Workspace Library” or “Projects Library”.  
• Add a clear, concise, and meaningful statement that describes the purpose of these areas on their main pages. |
| 5. All participants had trouble with the password requirements during registration. Participants averaged three attempts before successfully registering. | • Provide instant feedback at the field level.  
• Evaluate the need for highly complex password requirements.  
• Make instruction easier to read with larger, darker text. |
| 6. Three of five participants were unsure about the purpose of a workspace. | • Evaluate link names and conduct a card sort to determine the most meaningful link names.  
• Consider renaming “Workspaces” to “Projects”.  
• Add a clear, concise, and meaningful statement that describes the purpose of a workspace on the main workspaces page. |
| 7. Three of five participants experienced difficulty finding a list of workspaces from the home page. | • Change the sliding/hidden menu so that all major links are visible at once. |
| 8. Three of five participants were distracted by the number of elements on the home page. | • Reduce the number of elements on the home page.  
• Evaluate the purpose of the map function and whether it belongs on the home page.  
• Create clear labels and visual cues for actions that can be taken from the home page. |
Table 3: Minor Issues

<table>
<thead>
<tr>
<th>Problem</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. All participants reacted negatively to the security application.</td>
<td>• Evaluate the need for this high level of security.</td>
</tr>
<tr>
<td>(CAPTCHA)</td>
<td></td>
</tr>
<tr>
<td>10. All participants were initially confused and distracted by</td>
<td>• Eliminate the map and location field on the registration page.</td>
</tr>
<tr>
<td>location field and map function on the registration page.</td>
<td>• Location information is useful, allow users to enter it into their member profiles after completing registration.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>11. All participants had difficulty searching for E4C members in the</td>
<td>• Change the sliding/hidden menu so that all major links are visible at once.</td>
</tr>
<tr>
<td>member directory.</td>
<td>• Allow users to search E4C members by name and/or user name, and/or location in the members directory.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Four of five participants were not able to read scrolling text on</td>
<td>• Allow users to pause the scrolling pictures.</td>
</tr>
<tr>
<td>home page.</td>
<td>• Slow down the scroll speed.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a final note, we strongly urge you to repeat usability testing after addressing these issues. Conducting a similar usability study as outlined in this report will confirm the success of your modifications or reveal outstanding issues.
Introduction

This report delivers the findings and recommendations resulting from a usability study conducted by the Hufflepuff Team. It includes background information on the project as well as the following:

• Methodology used to collect data
• Usability test results that include findings, analysis, and recommendations
• Recommendations for further testing
• Appendices supporting our process and findings, including documents created in preparation for the usability test and data collected from the overall usability study

Project Background

We were engaged to evaluate the usability of their website, Engineeringforchange.org (E4C). Under the guidance of our instructor, Dr. Carol Barnum, the study took place over the course of four months and consisted of the following components:

• Identifying goals and objectives
• Creating user personas
• Conducting a heuristic evaluation
• Designing the test plan
• Conducting user testing

The Hufflepuff Team consists of three graduate students and one undergraduate student in the Information Design and Communication program at Southern Polytechnic State University (SPSU) in Marietta, Georgia.

Our process began with a kickoff meeting on August 30, 2011 for the project sponsor and usability study team to meet, identify goals, and gather background information. Having launched the E4C website in January 2011, you sought to increase membership by improving the user experience on the site. You identified professional engineers, engineering students, non-government organizations, and corporations as the primary user groups taking advantage of the E4C content and community resources.
Based on our meetings with you, our analysis of current users of the E4C site, and interviews with engineers with characteristics similar to current E4C members, we created personas of typical E4C users and performed a heuristics (expert) evaluation of the site. We then designed a test plan, recruited test participants, and conducted usability tests.

**Persona of Elsie Manning**

Before testing the E4C website, we created a persona based on users of the site. We took a broad sampling of data by searching through member profiles within the E4C community, through interviews with engineering professionals, and through communicating with engineering students on the SPSU campus. Our research led us to develop two personas. One was a student persona, and another, named Elsie Manning, an experienced engineering professional. We decided to conduct testing using participants resembling Elsie Manning as opposed to the student profile for two main reasons:

1. Elsie Manning better fit the user profile of E4C based on our data.
2. The student profile was already focused upon by another Usability Testing class group. We wanted to give you findings for a different data set.

Given our timeline, resources, and existing professional network we reached out to a pool of engineers who possessed Elise’s core qualities and who were amenable to participating in the study. Although they are not perfect matches (different age and gender), our participants were available immediately for testing, which enabled us to meet our deadlines and stay within budget. The persona of Elsie Manning can be found in Appendix A.

**Heuristics Report**

We completed a heuristics evaluation of the website using a set of guidelines known as Nielsen’s Heuristics (found online at [http://www.useit.com/papers/heuristic/heuristic_list.html](http://www.useit.com/papers/heuristic/heuristic_list.html)). These ten guidelines are detailed in Appendix B. The evaluation identified a number of issues both favorable and unfavorable dealing with the E4C website. We ranked them based on severity and provided recommendations for each. The Heuristic Evaluation Report is found in Appendix C.
Test Plan

From our persona development and heuristic evaluation, we designed a test plan to structure our test methodology and to guide participants through usability testing of the E4C website. The test plan is comprised of a screening questionnaire, a pre-test questionnaire, task-based scenarios, post-task questionnaires, a post-test questionnaire, the System Usability Scale questionnaire (SUS), and product reaction cards. It is provided in Appendix D. Based on criteria detailed in our test plan, we recruited usability test participants possessing the primary professional characteristics of our persona, Elsie Manning.

Test Purpose, Process, and Goals

We performed usability testing to gain an understanding of the user experience on the E4C website. By testing, documenting, and analyzing participants’ experience as they performed typical tasks, we obtained data about users' experience with the website which will support the recommendations we make to improve the site's usability.

This report details the results of the usability test we conducted. We gathered the results from one pilot test and five usability tests held in November of 2011. We used task-based scenarios to record and evaluate the participants’ experience performing the following tasks:

- Describing the purpose of the site.
- Registering as a new user to determine if participants can successfully navigate the login name and password requirements.
- Searching for a specific member and a workspace.
- Joining a workspace.
- Using the site’s top-level navigation to find the Solutions Library.

Test Facility

To simulate a realistic and comfortable setting, while maintaining a consistent test environment for all participants, we performed all tests in the student usability center at SPSU. It is a two-room facility containing a control room and an evaluation room.
The control room contains the equipment and space we needed to record, observe, and log the tests. The technical equipment is detailed in the Test Plan in Appendix D. A one-way mirror prevents the user from seeing into the control room.

The evaluation room was configured as an office environment with a desktop computer, simulating an office or home setting where the user would be comfortable using the website. It has cameras strategically placed to observe the user and the monitor which are operated from the control room. The technical equipment found in the evaluation room can also be found in the Test Plan in Appendix D.
Methodology

The methodology section describes the process and tools used to perform the usability tests and collect the data informing our findings and recommendations provided in this report. This section gives a brief explanation of those processes and tools:

- Participant recruitment
- Test limitations
- Screener
- Video consent forms
- Scenarios
- Moderator's script
- Test questionnaires
- Product reaction cards

**Participant Recruitment**

To represent the E4C user, we selected participants who shared similar professional characteristics and motivation as our primary persona, Elsie Manning. We targeted participants who were active professional engineers, aged 25-60 years old, and interested in community service. To identify candidates, we contacted family, friends, academic, and professional contacts. We also recruited through the SPSU campus-wide e-newsletter, emailed the SPSU engineering faculty, and emailed local engineering firms.

**Test Limitations**

Although our goal was to recruit participants in a broad range of ages and both genders, we were unable to attract participants across this spectrum. This limitation resulted in a narrow subset of the E4C user population, which comprises all males in their 20s and early 30s. While the final participants do not mirror the age and gender of our persona, they are similar in profession, motivation, charitable interests, and familiarity with the Internet. Future testing should be done with a more diverse user population that includes women and more seasoned professionals.
Methodology (continued)

While we recruited six participants for the usability testing, we used the data collected from only five. We encountered several equipment failures surrounding the microphone, eye-tracking software, and the DVD video recorder while testing the pilot (first) participant. Lacking these important tools, the data collected during this test was incomplete and thus disregarded. We were unable to repair the eye-tracking tool in time for testing, but our sister team did and will provide those data.

Table 4, Participant Profile, provides a brief description of each participant showing demographic data used to form the findings in this report.

Screening Questionnaire
We created a screening questionnaire, or screener, as a tool to help focus our recruitment on candidates with characteristics similar to our persona. We queried potential candidates and qualified them for participation in the test by following the screener. A copy of the screener is provided in Appendix E.

Video Permission Form
Before each participant took part in the usability test, we informed them that they were to be recorded, pointed out the cameras in the room, and invited them to ask any questions they had about the process they were about to undertake. Each participant signed a video permission form authorizing us to record them and to use the recorded information and data in a report and test. Copies of the executed video permission forms can be found in Appendix J.
### Table 4. Participant Profile

<table>
<thead>
<tr>
<th>Name</th>
<th>Participant Number</th>
<th>Age</th>
<th>Gender</th>
<th>Profession</th>
<th>Community Service interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>1</td>
<td>26</td>
<td>Male</td>
<td>Civil Engineer</td>
<td>Sheltering Arms</td>
</tr>
</tbody>
</table>
| Chris   | 2                  | 26  | Male   | Mechanical Engineer   | Red Cross
Boy Scouts of America |
| Wes     | 3                  | 25  | Male   | Mechanical Engineer   | Habitat for Humanity                                           |
| Jason   | 4                  | 31  | Male   | Mechanical Engineer   | Habitat for Humanity
Atlanta Boxer Rescue
Humane Society |
| Christian| 5                  | 29  | Male   | Manufacturing Engineer | Interested, not engaged with a particular group               |
Scenario Tasks
Using the results of the Heuristic Evaluation report, found in Appendix C, we created five scenarios to guide our test participants through the potential problem areas identified. They were given five to ten minutes to complete each task. Table 5, Scenarios and Goals, gives a brief overview of the heuristics tested, the scenarios presented to the participants in order to test each heuristic, and the goal of each scenario.

Moderator’s Script
The moderator greeted and interacted with each participant throughout the testing. In order to ensure uniformity during each test session, we followed a script using the same sequence of questions and instructions with each participant. Using this moderator’s script, found in Appendix I, we instructed participants to proceed as they would normally, including requesting help if needed. The moderator asked participants to “think out loud,” to help us capture their motivation for making choices.

Product Reaction Cards
We used product reaction cards to help evaluate each participant’s experience during testing. Created by Microsoft Corporation during product testing in 2002, product reaction cards are a set of 118 index cards each labeled with a single negative or positive descriptor written on them (e.g., Easy to use, Confusing, Simple). They are shuffled in a deck with a mix of 60% positive words and 40% negative.

After all tasks were completed, we asked each participant to review the 118 product reaction cards, which were laid out on a table. Each participant was instructed to study the cards and select as many as they needed to describe their feelings concerning the website and their experiences with it. Each participant explained their choices and how the site made them feel.
Table 5. Scenarios and Goals

<table>
<thead>
<tr>
<th>Heuristic Evaluated</th>
<th>Scenario Presented to Participant</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1-Aesthetic and minimalist design</td>
<td>Take a look around the home page of this website and tell us what you think about it, what you think you can do here, and where you would get started.</td>
<td>Getting a sense of the site purpose and ethos. Do they know what the site is and what it is for?</td>
</tr>
<tr>
<td>Scenario 2-Error prevention</td>
<td>You have decided to register on the site to see what added features become available to you. Do that now.</td>
<td>Will users abandon the registration process if confronted with too many errors? When they get the error message, do they understand what they did wrong-after hitting submit? Do they know how to correct the error?</td>
</tr>
<tr>
<td>Scenario 3-Flexibility and efficiency of use</td>
<td>You meet Jay Jones at a conference and you’d like to collaborate with him on a project. 1. On the site, show how you would see whether Jay Jones has set up a project that you might like to be involved in. 2. Find a project set up by another engineer.</td>
<td>Can users find workspaces and other members they have previously aligned with?</td>
</tr>
<tr>
<td>Scenario 4-Match between system and the real world</td>
<td>You found your conference colleague, Jay Jones, and now you’d like to collaborate with him. 1. How would you do this? 2. If you can’t find him, where would you go for assistance?</td>
<td>Are new users able to join a workspace easily?</td>
</tr>
<tr>
<td>Scenario 5-Consistency and standards</td>
<td>You would like to look at projects that other engineers have added to the site. How would you do this?</td>
<td>Is the top-level navigation intuitive? Can users find the E4C resources hidden menu?</td>
</tr>
</tbody>
</table>
Methodology (continued)

Questionnaires

Pre-test questionnaire
After screening we still found it necessary to distinguish the subtle differences between each of our participants that we did not capture with the screening process. We developed a pre-test questionnaire designed to obtain additional pertinent information regarding each test participant. We conducted an informal interview with each participant to complete the pre-test questionnaire, which also served as a chance to build rapport with them. We then asked them to complete the video consent form. An example is located in Appendix F.

Post-task questionnaire
After each task, we gave each participant a post-task questionnaire. This questionnaire asked the participant to review each task. We then asked if the task was difficult or easy, how involved the task was to complete, and to provide any thoughts that did not come up during the performing of the task. We have included the post-task questionnaire in Appendix G.

SUS questionnaire
The System Usability Scale (SUS) questionnaire is an industry-standard consisting of 10 Likert-scale statements. The Morae software available in our lab delivered the questions directly to the test participant computer. Participants responded to the statements with answers that are measured on a scale from 1 to 5. Morae then calculated their scores. The answers of all ten questions were factored together and calculated into a final number ranging from 1 to 100. Research indicates that scores above a range of 68-70 indicate that a given product is usable.

The composite score can also be used as a basis for comparison against future testing of updates. The SUS questions are found in the Post-Test Questionnaires section of Appendix H.

Post-test questionnaire
After the entirety of the test was completed, we gave each user a written post-test questionnaire to complete. This allowed participants to give overall comments and thoughts regarding their experience with the E4C website, and concerning the over-all test, in their own words. We provide this questionnaire in Appendix H of this report.
Findings

The Findings section provides the positive and negative issues experienced by our participants during testing. Using the methodology described in the previous section to capture our participants’ experience with the E4C site, we obtained both qualitative (feelings/impressions) and quantitative (numerical) data to support these findings and ranked them by severity. After we analyzed this data, we developed ways to remediate the negative issues. Our recommendations for improving the user experience follows each finding.

Positive Elements

We discovered several site elements that elicited positive feedback from our participants. Key positive findings from the usability test were as follows:

- All participants were able to find a specific E4C member using the search function.
- Three of five participants were able to identify the workspaces a member is involved with on a member profile page.
- All participants commented positively on the look of the E4C website.
- Despite showing and voicing difficulties with the E4C website, all participants expressed an interest in returning to the site.

Problematic Elements

Along with the positive elements, we also discovered many areas that provided difficulty for our participants. We rank these on the following slides in order of severity. For each finding, we specify the finding, provide a description and screen shot to illustrate it, identify participants who experienced each issue, provide supporting comments, and outline recommendations.

Severity

After gathering and assessing the data from our usability tests, we developed the following severity ranking system to rate the issues we discovered.

- **Catastrophic**—Prohibits users from performing their given task and requires an immediate modification
- **Major**—Frustrates or confuses users and requires repair as soon as possible
- **Minor**—Hinders the users’ ability to navigate and should be fixed when possible
Finding #1
Participants were unable to determine the purpose of the website and actions they could take on the website after their first viewing of the home page.

<table>
<thead>
<tr>
<th>Description</th>
<th>When asked to identify the purpose of the E4C website, participants either had no answer or made incorrect guesses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>Comments</td>
<td>“It does not seem local. Is if for learning about other cultures?” –Wes</td>
</tr>
</tbody>
</table>

Recommendations:
- The current mission statement is long and difficult to read. Create a concise, and prominent mission statement on the home page.
- Use more meaningful pictures that show engineering projects in order to visually communicate the mission statement.
- Ensure all images relate to their corresponding text.
- Change the sliding/hidden menu so that all major links are visible at once.
- Rename primary links to communication actions that can be taken on the E4C website.
Finding #2
Participants are not aware of the sliding/hidden top menu. This feature makes navigation very difficult.

Description
When looking for workspaces or members, participants did not recognize that they could click “E4C ReSourses” to reveal those menu items. This prevents or hinders users from completing most major tasks.

Participants
1,2,3,4,5

Comments
“The sliding menu is cool, but if you don’t know it’s there it makes navigation very difficult” – Jason

Recommendations:
- Change the sliding/hidden menu so that all major links are visible at once.
Finding #3
Many participants did not know to click “help solve this challenge” to join a workspace, and were unable to complete the task.

Description
When asked to join a workspace, several participants clicked in as many as five different areas before clicking on “help solve this challenge”. Some participants were not able to complete the task.

Participants 1, 2, 3

Comments
“There is no way to join a workspace on the workspace page” - Wes

Recommendations:
- Consider renaming button to “Join this workspace” or “Work on this project.”
- Conduct a card sort to determine the most meaningful button name.
Finding #4
Participants did not recognize the difference between workspaces and the solutions library.

Description
When directed to find a solution to a problem posted by other engineers, participants navigated to workspaces, not the solutions library.

Participants
1,2,3,4,5

Comments
“Okay, let’s see if I can remember how to get back to Workspaces.” -Chris

Recommendations:

• Change the sliding/hidden menu so that all major links are visible at once.
• Evaluate link names and conduct a card sort to determine the most meaningful link names.
• Consider renaming “Solutions Library” to “Library” and “Workspaces” to “Projects”.
• Add a clear, concise, and meaningful statement that describes the purpose of these areas on their main pages.
Finding #5
All users had trouble with the password requirements during registration.

Description
Participants averaged three attempts before successfully registering. Most participants showed and voiced frustration with password requirements. Many participants leaned close to the screen and squinted to read password requirements.

Participants
1, 2, 3, 4, 5

Comments
“This is tricky” – Scott.
“These are hard to read” – Christian

Recommendations:
• Provide instant feedback at the field level.
• Evaluate the need for highly complex password requirements.
• Make instruction easier to read with larger, darker text.
Finding #6
Many participants were unsure about the purpose of a workspace.

Description
Several participants were not aware that a workspace is a place to collaborate on projects with other members. After an explanation of a workspace, some participants suggested the term “projects” as an alternative.

Participants
2, 3, 4

Comments
“Why are they called workspaces? As engineers, we call them projects.” – Wes

Recommendations:

• Evaluate link names and conduct a card sort to determine the most meaningful link names.
• Consider renaming “Workspaces” to “Projects”.
• Add a clear, concise, and meaningful statement that describes the purpose of a workspace on the main workspaces page.
Finding #7
Participants experienced difficulty finding a list of workspaces from the home page.

Description: When directed to find workspaces from the E4C home page, participants did not know to click “E4C resources” to reveal the workspaces menu item. Most clicked an area of interest and found workspaces from there.

Participants: 3, 4, 5

Comments: “This is disappointing. I would like to be able to view all the workspaces” - Chris

Recommendations:

• Change the sliding/hidden menu so that all major links are visible at once.
Finding #8
Participants were distracted by number of elements on the home page.

Description
Most participants searched chaotically for a starting point on the home page. Multiple objects may make it difficult for users to focus and make it hard to understand the purpose of the website.

Participants 3,4,5

Comments “Join today...I see news...I see a bulletin board...what is this map...” -Jason

Recommendations:

• Reduce the number of elements on the home page.
• Evaluate the purpose of the map function and whether it belongs on the home page.
• Rearrange elements with F shaped reading pattern in mind.
• Create clear labels and visual cues for actions that can be taken from the home page.
Finding #9
Participants reacted negatively to Captcha security application at the bottom of the registration page.

Description
While only one of the participants had difficulty with the Captcha on the registration page, all participants commented that they disliked dealing with Captchas.

Participants
1,2,3,4,5

Comments
“I can never get these on the first try” Scott

Recommendations:
• Evaluate the need for this high level of security.
Finding #10
Participants were initially confused and distracted by location field and map function on the registration page.

Description
Participants often zoomed in and out of map and asked what was meant by “location” before typing their city and state.

Participants
1,2,3,4,5

Comments
“Location? That is a little ambiguous” –Chris

Recommendations:
• Eliminate the map and location field on the registration page.
• Location information is useful, allow users to enter it into their member profiles after completing registration.
Finding #11
Participants had difficulty searching for E4C members in the member directory.

Description When searching for another E4C member, participants abandoned searching the member directory and used the search function to find a member.

Participants 1,2,3,4,5

Comments “let’s try search instead” – Scott

Recommendations:

• Change the sliding/hidden menu so that all major links are visible at once.
• Allow users to search E4C members by name and/or user name, and/or location in the members directory.
Finding #12
Participants were not able to read scrolling text on home page.

Description
Participants commented that the pictures and text on home page flip too quickly. This may impact users’ understanding of the purpose of the E4C website.

Participants
1, 3, 4, 5

Comments
“The pictures are changing too fast. I’d like a pause button” – Jason

Recommendations:
• Allow users to pause the scrolling pictures.
• Slow down the scroll speed.
Findings (continued)

Post Task Analysis
This portion of the report focuses on the feelings and opinions of the participants. When reviewing this section, keep in mind that users tend to want to give feedback that is more positive than what is observed during testing. This common reaction is referred to as the acquiescence bias. In our study, qualitative findings are largely positive despite direct observation of difficulty and frustration.

Post Task questions
After each task, participants were asked to rate the difficulty of the task on a scale from 1 to 5. Their answers are included in Table 6.

<table>
<thead>
<tr>
<th>Task 1: Get a sense of the site’s purpose and ethos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task 2: Register as a new user.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task 3: Search for a specific member and a workspace.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task 4: Join a workspace.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task 5 Find the Solutions Library.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>
Findings (continued)

Post Test Analysis
After testing was concluded, participants were asked to rate how difficult or easy it was to use the E4C website on a scale from 1 to 5. Their answers are included in Table 7, Post Test Question Responses. Participants were also asked to comment on their overall impression of the E4C website. Their answers are included below.

“There are lots of good things here, it needs this testing though.” –Jason
“It’s consistently inconsistent” –Jason
“It should be organized better, but the content is good. I would like to come back and read through it” –Wes
“The site doesn’t seem ‘done’ yet, but the capabilities are there.” –Chris
“It's a lot better than what I expected from a nonprofit.” –Chris

Table 7. Post Test Question Responses

<table>
<thead>
<tr>
<th>Very difficult</th>
<th>Somewhat difficult</th>
<th>Neutral</th>
<th>Somewhat easy</th>
<th>Very easy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Findings (continued)

SUS

As mentioned in the Methodology section, research indicates that scores above a range of 68-70 indicate that a given product is usable. E4C scored above that range at 78.33.

Figure 1. Cumulative SUS score for all participants
Product Reaction Cards

Positive cards: 15
Ease of use: Effortless, Simplistic, Simplistic, Easy to use, Predictable, Flexible, Intuitive
Content: Valuable, High Quality, Engaging, Optimistic, Meaningful, Innovative, Entertaining
Design: Clean

The majority of positive product reactions card were chosen based on participants’ reaction to the content of the E4C site. Participants selected the words Valuable, High Quality, Engaging, Optimistic, Meaningful, Innovative, and Entertaining based on their feelings about the content and subject matter of the website.

Despite direct observation of participants experiencing difficulty and frustration during testing, many felt the E4C site was easy to use. The product reaction cards Effortless, Simplistic (chosen twice), Easy to use, Predictable, Flexible, and Intuitive were selected to describe participants’ experience completing tasks.

One participant selected the card Clean to describe the visual design of the site.

Negative cards: 4
Ease of use: Difficult, Hard to use
Design: Inconsistent, Disruptive

The small number of negative product reactions cards chosen were based on participants difficulty completing tasks and the visual design of the E4C site. The cards Difficult and Hard to use were selected based on a participant’s frustration and difficulty completing tasks. The cards Inconsistent and Disruptive were selected based on the variety of layouts between pages and the number of elements on a page.
Conclusion

We conducted this study to identify the areas where the E4C site is succeeding as well as falling short. We have detailed the positive elements, problematic elements, and recommendations for improving catastrophic, major, and minor issues. We strongly encourage you to conduct follow up usability testing to confirm the effectiveness of those improvements.

In addition to retesting after making modifications, we strongly encourage you to conduct additional testing on a broader participant pool than we used during this study. Future testing should include a more balanced mix of gender and age ranges.

We also recommend addressing a scripting error that appeared throughout the site when the site was opened using Internet Explorer. This error was not addressed as part of the usability testing since it is seems more programmatic than a usability issue.

SPSU Usability Center for Additional Testing

Ideally, all follow up testing should be conducted using the same methodology as that used during the study. Aside from the cost savings in time and resources, doing so creates a consistent basis for comparison. Consider testing site redesigns at the SPSU Usability Center, making use of the same test materials already employed in this project and included as attachments to this report (pre-test questionnaire, task-based scenarios, post-task questionnaires, post-test questionnaire, system usability scale questionnaire (SUS), and product reaction cards). By using the test material provided, you will have a clear basis for comparison and a better indication if the modifications improve the user experience.

Thank you

We thank you for the opportunity to work with you and to examine your website. For the Hufflepuff team, conducting the usability study for E4C has been a rich and worthwhile experience. Our hope is that you find our results and recommendations beneficial to your organization as well as to the overall E4C user experience.
Appendix A
Persona - Elsie Manning
Elsie Manning

“After working for nearly 30 years in the engineering field, I would now like to give back to society, using my skills in a meaningful way.”

Elsie volunteers when she can. In college, and for the majority of her career, Elsie successfully adapted to working in a male-dominated industry. Overcoming that career-challenge motivated her to mentor young women in the field whenever possible. She is interested in continuing that pursuit. Elsie also has a keen interest in ecology and environmental issues. She thinks that her engineering skills and desire to improve efficiency transcends to other engineering fields. In the past, Elsie has volunteered for Habitat for Humanity by building houses and designing landscapes. She may want to continue that, but also plans to explore various fields to see where she can provide the most impact.

Elsie uses the Web at work as a research and collaboration tool. She typically bookmarks useful sites. To Elsie, good sites allow her to find the specific information she needs quickly. She will commonly visit a site for answers to specific questions, i.e., what is ‘this thing’ on a system board called, or what are the specifications for a manufacturer’s part. She gets frustrated when documents are not available on a site or are difficult to find. Under those conditions, she returns to sites with a logical, intuitive path to what she needs.

Overall, Elsie’s goals are to devote more time using her electrical engineering skills and growing interests in other areas of engineering in a charitable way, perhaps even on a global scale. Using the internet to assist in that goal would save her time and expand the impact she can make.

Demographic:

- **Gender**: Female
- **Age**: 52
- **Occupation**: Electrical Engineer
- **Income**: 125k
- **Technical Profile**: Product development, primarily in the NASA space program
- **Internet use**: 4 hours daily for work collaboration
- **Hobbies**: Gardening, ecology activities, hiking, traveling to see children

Elsie takes pride in the fact that she has been able to balance raising her children with a rewarding engineering career. The children are now grown and Elsie is interested in strengthening her connection to the engineering community at large as well as exploring more activities outside of work.

Elsie regularly communicates with other engineers via peer groups to make sure her skills remain current and to provide new insight for her projects.
Appendix B
Nielsen's Heuristics
Ten Usability Heuristics

Jakob Nielsen's heuristics are listed as follows with explanations of each (Nielsen, 1994):

- **Visibility of system status**—The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

- **Match between system and the real world**—The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

- **User control and freedom**—Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

- **Consistency and standards**—Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

- **Error prevention**—Even better than good error messages is a careful design, which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

- **Recognition rather than recall**—Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

- **Flexibility and efficiency of use**—Accelerators, unseen by the novice user, may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

- **Aesthetic and minimalist design**—Dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

- **Help users recognize, diagnose, and recover from errors**—Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

- **Help and documentation**—Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.
Appendix C
Heuristic Evaluation Report
Engineeringforchange.org:

Heuristic Evaluation

Sponsored by IEEE and ASME:

Prepared for Kasmore Rhedrick and Candace Beach
Prepared by Hufflepuff Team: Nathan Atkins, Laurie Bennett, Brian Domit, Jeffrey Jones
September 29, 2011
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Executive Summary

This report contains the results from a heuristic evaluation of the Engineering for Change (E4C) Web site, completed by our team (Hufflepuff Team) on 9/25/11. The team mimicked basic tasks a new user might perform while evaluating the site based on Jakob Nielsen’s *Ten Usability Heuristics*. We noted both positive and negative findings.

Using the profile of a typical user, developed previously, we found that although the E4C Web site conforms to Nielsen’s heuristics in several areas, overall the site is difficult to navigate when attempting basic site tasks.

Positive findings—The E4C Web site conforms to Nielsen’s heuristics in several areas, as highlighted in these top positive findings:

- **Visibility of system status**—When trying to participate in a workspace or discussion without logging in, a balloon appears informing the user they are not registered and points to the registration page.
- **Error prevention**—If users are not signed into the site they are taken to the registration page.
- **Help users recognize, diagnose, and recover from errors**—Error messages are written in plain language making them easy to understand.

Negative findings—We found the site contains 11 minor issues, 20 major issues, and 1 catastrophic issue. The catastrophic and major issues, listed below, interfere with a user’s ability to navigate the site.

- **Flexibility and efficiency of use** (Catastrophic issue)—Limited ability exists for experienced users to find specific information; an Advanced Search function is needed.
- **Match between system and the real world** (Major issue) — Joining a workspace is not intuitive. Users may not understand they need to click “Help solve this challenge” to join.
- **Consistency and standards** (Major issue)—The top navigation menu lacks consistency with Web standards. The “Areas of Interest” menu hides the secondary E4C Resources.
- **Error prevention** (Major issue)—The registration process forces users to complete the entire process before notifying the user of unacceptable answers.
- **Recognition rather than recall** (Major issue) — Bulletin board graphics at the bottom of the interior pages are not clickable, which forces users to retrace steps to find their desired pages.
- **Aesthetic and minimalist design** (Major issue)—The E4C Web site is cluttered and the color palette does not create enough contrast between background and type to produce adequate legibility.
- **Help and documentation** (Major issue)—The Help function does not sufficiently explain how to navigate or find information on the Web site.

For each negative finding, we recommend improvements that adhere to Nielsen’s criteria for usable sites. The most imperative improvements include integrating an advanced search function and modifying the process to join a workspace.

The E4C site contains useful, meaningful information and tools; it offers users beneficial features that adhere to Nielsen’s usability heuristics. However, we recommend addressing the problem areas highlighted here and discussed in detail (along with additional issues) in this report to improve the overall user experience.
**Introduction**

As we approach formal usability testing of the Engineering for Change Web site (www.engineeringforchange.org), we performed a heuristic evaluation of E4C to better define our testing criteria. Heuristics are a set of principles, used by experts to inspect a Web site interface in search of violations of the heuristics (Barnum, 2011). The potential problems revealed during the heuristic evaluation are then emphasized during formal usability testing.

The Hufflepuff Team conducted the heuristic evaluation in a one-week period, 09/18/11—09/25/11. We used the Elise Manning persona, developed as a team last week, and created a scenario in which she performed the following tasks:

- Become a member
- Join/create a workspace
- Find another member
- Find a technical solution
- Post/reply to bulletin board

Elsie represents the profile of many users of the site. She is an engineer in her 50s who is looking to give back to society. Elsie spends several hours a day on the Web, and prefers sites that are simple with clear, logical paths to information she requires.

In this document, the **Methods** section describes the process used by our team to conduct the heuristic evaluation. The **Evaluation Findings** section, details the site rankings according to each of Nielsen's ten heuristics, and concludes with a **Summary of Recommendations**.

Our primary goal for the heuristic evaluation is to identify areas in which users may encounter problems while completing basic tasks on the site. We also provide recommendations for improving any issues we find. We will use the data collected in this evaluation to build realistic, effective scenarios for planned formal usability testing.
Methodology

Evaluation Process

To conduct this heuristic evaluation, each member of our team individually stepped through five common user tasks and evaluated the Engineering for Change (E4C) site according to Jakob Nielsen's *Ten Usability Heuristics*.

We identified five tasks that most E4C users frequently need. We chose these tasks based on feedback from our E4C sponsors during the kickoff meeting.

Prior to this evaluation phase, our team created two personas (typical users) for the site: an engineering student and a professional engineer. They were both informed by current E4C user profiles, personal interviews, Web analytics data, and information provided during the kickoff meeting. Of the two personas, we chose to perform the evaluation through the eyes of Elsie, our professional engineer persona. We chose her to offer our sponsor the perspective of their primary user community, professional engineers.

In order for each team member to independently evaluate the site, we created two scenarios to guide Elsie through her use of the E4C Web site. The scenarios are probable stories encompassing the tasks that Elsie needs to accomplish on the E4C site.

Our team had the option of choosing from various heuristics to perform the evaluation. We chose Jakob Nielsen's *Ten Usability Heuristics* for two reasons:

- They are well known in the usability community.
- They offer specific and objective criteria to help our team deliver consistent evaluations.

Nielsen's heuristics guided each team member through an independent evaluation of E4C as we ran through Elsie's two scenarios. We created a ranking system to report the severity of positive and negative issues encountered. This ranking system and Nielsen's heuristics are used throughout this report's results.

The tasks, persona, scenarios, heuristics, and rankings we used are detailed in the following subsections.

Tasks

The five main tasks used to evaluate the E4C site are common user activities:

- **Become a member**—The driving task that supports much of the activity on the site revolves around a user’s ability to create a membership with E4C through the Web site registration process.
- **Join a workspace**—This task enables a user to offer or solicit help regarding a project or given area of interest.
- **Find another member**—Tasked with locating help or advice on the site concerning areas of interest, users frequently need to search for like-minded site members, geographic neighbors, and those members seeking solutions the user already possesses.
- **View a technical solution**—The E4C site is frequently a destination for users seeking answers to common and isolated engineering problems. The task of finding previously completed solutions is an important one.
• **Post and reply to bulletin board**—Community message boards provide a forum for members to request or offer materials, expertise, and other resources. The bulletin boards also foster communication and feedback. Users need to be able to perform this task on a regular basis in order to fulfill goals.

**Personas**

Elsie Manning is the professional engineer persona. She fits the following demographics:

- **Gender**—Female
- **Age**—52
- **Occupation**—Electrical Engineer
- **Income**—125k
- **Technical profile**—Product development, primarily in the NASA space program
- **Internet use**—four hours daily for work collaboration
- **Hobbies**—Gardening, ecology activities, hiking, traveling to see children
- **Motivation**—Interested in giving back to society and mentoring young engineers, especially woman engineers

**Scenarios**

The following two scenarios were used in conjunction with our five tasks to walk the persona of Elsie through the E4C Web site.

**Scenario 1**

Elsie is eager to use her knowledge of engineering and her experience in the field to mentor young engineers and engineering students. Elsie has mentored young engineers where she could, but is interested in reaching a larger number of up and coming engineers. She is equally interested in volunteering for an organization that can use her skills to help improve the quality of life for impoverished societies. While Elsie has helped with Habitat for Humanity before, she would like to find new opportunities to volunteer on a global scale. To accomplish these goals, Elsie wants to join the E4C community in order to contribute to workspaces, mentor aspiring and new engineers, and troubleshoot with other engineers through the bulletin board.

**Scenario 2**

Elsie is involved with a workspace on the E4C Web site that is trying to develop a solar energy solution for rural schools in Africa. She wants to find other E4C members who may be able to help, review previous technical solutions for help, and post a question where the entire E4C community can review the more difficult points of her case.

**Heuristics**

Jakob Nielsen's *Ten Usability Heuristics* are listed as follows with explanations of each (Nielsen, 1994):

- **Visibility of system status**—The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.
• **Match between system and the real world**—The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

• **User control and freedom**—Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

• **Consistency and standards**—Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

• **Error prevention**—Even better than good error messages is a careful design, which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

• **Recognition rather than recall**—Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

• **Flexibility and efficiency of use**—Accelerators, unseen by the novice user, may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

• **Aesthetic and minimalist design**—Dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

• **Help users recognize, diagnose, and recover from errors**—Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.
• **Help and documentation**—Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

**Ranking System**
Throughout the evaluation process, we ranked each of the findings according to the five-stage progression as follows:

- **Positive**—Results in a beneficial effect on the user’s ability to perform their given task
- **Cosmetic Issue**—Affects the appearance and should be fixed only if time permits
- **Minor Issue**—Hinders the user’s ability to navigate and should be fixed when possible
- **Major Issue**—Frustrates or confuses users and requires repair as soon as possible
- **Catastrophic Issue**—Prohibits users from performing their given task and requires an immediate modification
Evaluation Findings

Positive Findings
The E4C Web site conforms to Nielsen’s heuristics in several areas:

1. Visibility of system status
   - The new user registration page immediately informs users when a problem with registration information occurs.
   - When trying to participate in a workspace or discussion without logging in, a balloon appears to inform the user they are not registered and points to the registration page.

2. Match between system and the real world
   - The site terminology is common among the intended audience.
   - The E4C Web site follows traditional standards for registering.

3. User control and freedom
   - Individual member profile pages have a "Back to all members" link.
   - Technical Solutions have a “Return to all solutions” link.
   - Users can click the E4C logo in the upper left-hand corner to return home.

4. Error prevention
   - If a user is not signed into the site, they are taken to the registering page.

5. Help users recognize, diagnose, and recover from errors.
   - Error messages are written in plain language and are easy to understand.
### Negative Findings

There were several places where the E4C Web site did not conform to Nielsen’s heuristics. We reviewed all five tasks for each heuristic but only report on those where an issue was found. Those problem areas are detailed below. For each heuristic, we've listed the task uncovering the issue, the severity of the issue, details of the issue, a recommendation for improvement, and where appropriate, a supporting screenshot.

### 1. Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Become a member:</td>
<td><img src="image1.png" alt="Screen Shot" /></td>
</tr>
<tr>
<td>Minor issue—Verification that the site recognizes a user is in very faint type. The lack of contrast between the type and background reduces legibility.</td>
<td></td>
</tr>
<tr>
<td>Recommendation—Choose a darker font color to create a stronger contrast against the green background.</td>
<td></td>
</tr>
<tr>
<td>1.2 Join/create a workspace:</td>
<td><img src="image2.png" alt="Screen Shot" /></td>
</tr>
<tr>
<td>Minor issue—Button for joining a workspace is too small and takes too much effort to find.</td>
<td></td>
</tr>
<tr>
<td>Recommendation—Increase the size and color contrast of the &quot;Help solve this challenge&quot; button to make it stand out from the surrounding elements.</td>
<td></td>
</tr>
</tbody>
</table>
## 2. Match between system and the real world

The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1 Become a member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Minor issue</strong>—The button to become a member is titled “Register Now”. Most users will look for a button titled “Join.”</td>
<td><img src="image1" alt="Register Now" /></td>
</tr>
<tr>
<td>Recommendation—Change &quot;Register Now&quot; button title to “Join E4C”.</td>
<td></td>
</tr>
<tr>
<td><strong>2.2 Join a workspace:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Major issue</strong>—Joining a workspace is not an intuitive process. Users may not understand they need to click “Help solve this challenge” to join.</td>
<td><img src="image2" alt="Help solve this challenge" /></td>
</tr>
<tr>
<td>Recommendation—Change “Help solve this challenge” button to “Join this workspace”, relocate it closer to the workspace title, and increase the size and contrast of the button.</td>
<td></td>
</tr>
<tr>
<td><strong>2.3 Find another member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Minor issue</strong>—From the home page, users must know to click “E4C Resources” in order to see the “Member” button. This takes too many clicks, is not intuitive, and the labeling does not correspond to real world verbiage.</td>
<td><img src="image3" alt="E4C Resources" /></td>
</tr>
<tr>
<td>Recommendation—Instead of hiding the &quot;E4C Resources&quot; navigation menu, create a 2nd navigation row for the &quot;E4C Resources&quot; below the &quot;Areas of Interest&quot; navigation menu.</td>
<td></td>
</tr>
</tbody>
</table>
### 2.4 Find a technical solution:

**Minor issue**—Users with interests not represented by the existing categories may feel undervalued.

Recommendation—Areas of Interest menu in the Solutions Library, needs an “Additional Interest” button for users who do not see their area listed.

### 2.5 Post/reply to Bulletin board:

**Major issue**—To create a post on the bulletin board, the user must click “New ___ Request”. This is not an intuitive step.

Recommendation—The term commonly used when writing on a Bulletin board is *Post*. Rename the button “Create a new post.”
3. User control and freedom

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Become a member:</td>
<td></td>
</tr>
<tr>
<td>3.2 Join a workspace:</td>
<td></td>
</tr>
<tr>
<td>3.3 Find another member:</td>
<td></td>
</tr>
<tr>
<td>3.5 Post/reply to Bulletin board:</td>
<td></td>
</tr>
</tbody>
</table>

**Minor issues**—Each of these tasks require using the back button to leave an unwanted state.

Recommendation—Create a button or link returning users to their previous page, similar to the Solutions Library link, "Return to all solutions". A link to the home page would also be helpful.
4. Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Become a member:</td>
<td></td>
</tr>
<tr>
<td>4.2 Join a workspace:</td>
<td></td>
</tr>
<tr>
<td>4.3 Find another member:</td>
<td></td>
</tr>
<tr>
<td>4.4 Find a technical solution:</td>
<td></td>
</tr>
<tr>
<td>4.5 Post/reply to Bulletin board:</td>
<td></td>
</tr>
</tbody>
</table>

**Major issues**—All tasks are affected by this issue. The top navigation menu lacks consistency with Web standards. The "Areas of Interest" menu hides the secondary "E4C Resources" menu unless the user clicks on "E4C Resources".

Recommendation—The navigation inconsistencies can be resolved by integrating the same solution as #2.3: Add a 2nd navigation row for "E4C Resources" below the Areas of Interest menu.
5. Error prevention

Even better than good error messages is a careful design, which prevents a problem from occurring in the first place.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.1 Become a member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Major issue</strong> — The registration process forces users to complete the entire process before notifying the user of unacceptable answers, i.e., the email address is already in use, the password does not conform or is weak.</td>
<td><img src="https://via.placeholder.com/150" alt="Screen Shot" /></td>
</tr>
<tr>
<td><strong>Recommendation</strong> — During the registration process, notify users of errors at the collection point, before user clicks “Create profile.”</td>
<td><img src="https://via.placeholder.com/150" alt="Screen Shot" /></td>
</tr>
</tbody>
</table>
6. Recognition rather than recall
Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Become a member:</td>
<td></td>
</tr>
<tr>
<td><strong>Minor issue</strong>—After registration, there is no indication of what to do next. Is the next step to go to the &quot;Members Area&quot;?</td>
<td></td>
</tr>
<tr>
<td>Recommendation—Create content encouraging users to explore different areas of the E4C site.</td>
<td></td>
</tr>
<tr>
<td>6.2 Post/reply to Bulletin board:</td>
<td></td>
</tr>
<tr>
<td><strong>Major issue</strong>—The horizontal menu contains a 2nd menu, which causes users to overlook the bulletin board. Users may think they need to remember a different path to the bulletin board.</td>
<td></td>
</tr>
<tr>
<td>The &quot;Bulletin Board&quot; box on the home page and at the bottom of the interior pages is not clickable. It has a clear call to action with no opportunity for users to do anything, and is unlikely to be seen at bottom of the page.</td>
<td></td>
</tr>
<tr>
<td>Recommendation—Add a 2nd row menu for E4C Resources below the Areas of Interest menu. This will make links to the Bulletin Board and Solutions Library visible and easy to select. Remove Bulletin Board and Solutions Library boxes from home page.</td>
<td></td>
</tr>
</tbody>
</table>
7. Flexibility and efficiency of use

Accelerators, unseen by the novice use, may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7.1 Join a workspace:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Minor issue</strong>—Workspace filter “Least Recent” is confusing. Is that recent activity? Oldest created? This is not clear.</td>
<td></td>
</tr>
<tr>
<td>Recommendation— It would be more conventional to search the workspace by the most recently created workspace. Use a more conventional filter such as “Newest workspaces”.</td>
<td></td>
</tr>
<tr>
<td><strong>7.2 Find another member:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Catastrophic issue</strong>—Experienced users need a way to quickly find the person they are looking for. It is very difficult and time consuming to find a specific member.</td>
<td></td>
</tr>
<tr>
<td>Recommendation—Create a search function that allows users to search by member name, demographic, workspace title, workspace area of interest, etc.</td>
<td></td>
</tr>
</tbody>
</table>
8. Aesthetic and minimalist design
Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Become a member:</td>
<td></td>
</tr>
<tr>
<td>8.2 Join a workspace:</td>
<td></td>
</tr>
<tr>
<td>8.3 Find another member:</td>
<td></td>
</tr>
<tr>
<td>8.4 Find a technical solution:</td>
<td></td>
</tr>
<tr>
<td>8.5 Post/reply to Bulletin board:</td>
<td></td>
</tr>
</tbody>
</table>

**Major issues**—All tasks are affected by this issue. The E4C Web site is cluttered and difficult to read. The reduced legibility hinders users. A lack of contrast between shades of green affects those with color blindness or impaired vision.

**Recommendation**—Simplify pages where possible to reduce visual noise. Ensure there is sufficient contrast between text and background color.
9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>No issues found</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
</table>

10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

<table>
<thead>
<tr>
<th>Task/Issue/Recommendation</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 Become a member:</td>
<td></td>
</tr>
<tr>
<td>10.2 Join a workspace:</td>
<td></td>
</tr>
<tr>
<td>10.3 Find another member:</td>
<td></td>
</tr>
<tr>
<td>10.4 Find a technical solution:</td>
<td></td>
</tr>
<tr>
<td>10.5 Post/reply to Bulletin board:</td>
<td></td>
</tr>
</tbody>
</table>

**Major issues**—All tasks are affected by this issue. The Learning Center describes the different areas of interests that are available. It does not sufficiently explain how to navigate or find information on the Web site. There is insufficient help for each of the five tasks.

Recommendation— Many of the issues discussed in the "Evaluation and Findings" section make navigating and locating information on the site difficult. Add a help button at the top of every screen or other help function to assist users.
## Summary of Recommendations

<table>
<thead>
<tr>
<th>Issue #</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1- User verification message is difficult to see</td>
<td>Choose a darker font color to create a stronger contrast against the green background.</td>
</tr>
<tr>
<td>1.2- Workspace participation button is too small, is overlooked</td>
<td>Increase the size and color contrast of the &quot;Help solve this challenge&quot; button to make it stand out from the surrounding elements.</td>
</tr>
<tr>
<td>2.1 - Membership button wording is vague</td>
<td>Change &quot;Register Now&quot; button title to “Join E4C.”</td>
</tr>
<tr>
<td>2.2 - Joining a workspace is not intuitive</td>
<td>Change “Help solve this challenge” button to “Join this workspace”, relocate it closer to the workspace title, and increase the size and contrast of the button.</td>
</tr>
<tr>
<td>2.3 - &quot;E4C Resources&quot; menu hidden, content overlooked</td>
<td>Instead of a hidden &quot;E4C Resources&quot; navigation menu, create a 2nd navigation row for the &quot;E4C Resources&quot; below the &quot;Areas of Interest” navigation menu.</td>
</tr>
<tr>
<td>2.4 – Users with unrepresented areas of interest are undervalued</td>
<td>Create a new button, &quot;Additional Interest&quot;, under Areas of Interest.</td>
</tr>
<tr>
<td>2.5 - Bulletin board comment button wording is not intuitive</td>
<td>The term commonly used when writing on a Bulletin board is Post. Rename the button “Create a new post.”</td>
</tr>
<tr>
<td>3.1-3.5 - Most pages provide no shortcut back to main E4C home page</td>
<td>Create a button or link returning users to their previous page, similar to the solutions library link, &quot;Return to all solutions&quot;. A link to the home page would also be helpful.</td>
</tr>
<tr>
<td>4.1-4.5 – The dual navigation menu is inconsistent with Web standards and confuses users</td>
<td>The navigation inconsistencies can be resolved by integrating the same solution as #2.3: Add a 2nd navigation row for &quot;E4C Resources&quot; below the Areas of Interest menu.</td>
</tr>
<tr>
<td>5.1 – Registration process allows users to enter data after errors are made, then forces them to repeat entry</td>
<td>During the registration process, notify users of errors at the collection point, before user clicks “create profile”.</td>
</tr>
<tr>
<td>6.1 – Users need help knowing what to do next after registering</td>
<td>Create content encouraging users to explore different areas of the E4C site.</td>
</tr>
<tr>
<td>6.2 – Bulletin Board and Solutions Library are difficult to find</td>
<td>Add a 2nd row menu for E4C Resources below the Areas of Interest menu. This reveals links to the Bulletin Board and Solutions Library. Remove Bulletin Board and Solutions Library boxes from home page.</td>
</tr>
<tr>
<td>7.1 – Workspaces sort filters are confusing</td>
<td>It would be more conventional to search the workspace by most recently created workspace. Change the filter to “Newest workspaces” or something of that nature. This would be more conventional and intuitive.</td>
</tr>
<tr>
<td>7.2 – Limited ability for experienced users to find specific information</td>
<td>Create a search function that allows users to search by member name, demographic, workspace title, workspace area of interest, etc.</td>
</tr>
<tr>
<td>8.1-8.5 - E4C site is difficult to read, pages are cluttered, background and font colors lack contrast</td>
<td>Simplify pages where possible to reduce visual noise. Ensure there is sufficient contrast between text and background color.</td>
</tr>
<tr>
<td>10.1-10.5 - Learning Center provides insufficient explanations</td>
<td>Many of the issues discussed in the &quot;Evaluation and Findings&quot; section make navigating and locating information on the site difficult. Add a &quot;Help&quot; button at the top of every screen or other help function to assist users.</td>
</tr>
</tbody>
</table>
Conclusion
Our evaluation reveals several issues preventing users from performing desired tasks on the EC4 site. We will incorporate the Catastrophic and Major issues into our formal usability testing. We expect that by identifying, analyzing, and using these issues as part of the testing, we will offer further recommendations for improving the experience for the site’s users.

References

Appendix D

Test Plan
Test Plan

Sponsored by IEEE and ASME:
Prepared for Kasmore Rhedrick and Candace Beach
Prepared by Hufflepuff Team: Nathan Atkins, Laurie Bennett, Brian Domit, Jay Jones
November 15, 2011
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Purpose

The purpose of this report is to present the plan for testing the EngineeringforChange.org website. The usability test will gather data about how users complete five primary tasks, what problems they encounter when completing these tasks, and their overall feelings about the website.

As our project sponsors, you want to know if new users are able to understand the purpose of the site, how intuitive it is for users to complete the primary tasks, and how easy or difficult it is for users to navigate the site.

The following test plan provides:

- The problem statement and test objectives
- User profiles
- Testing methodology
- Tasks and scenarios
- Testing facility and equipment
- Evaluation methods
- Project deliverables
- Questionnaires
  - Participant screening questionnaires
  - Pre-test questionnaire
  - Post-task questionnaires
  - Post-test System Usability Scale (SUS) questionnaire
  - Product Reaction cards
  - Post-test questionnaire
- Moderator script
- Video permission
- User persona
Problem Statement and Test Objectives

Our usability study of the Engineering for Change (E4C) website will assess the user experience of the website as participants complete typical tasks and become familiar with the site. This study will provide qualitative and quantitative data on the ease with which users complete five primary tasks, problems users encounter during each task, and their overall feelings about the website.

Our team met with you twice in the beginning of the project to identify your primary concerns about the E4C website as well as other objectives for this study. These concerns include the following:

- New user registration
- Searching for another member
- Procedure for joining a workspace
- Procedure for viewing a technical solution
- Navigation: are users able to easily navigate the site to complete tasks quickly?
- Readability and comprehension: do users understand the language on the site? Is the text easy to read?
- User satisfaction: which aspects of the site do users like or dislike?
User Profile

Through our initial project conversations with you and follow up research, we developed a user persona embodying characteristics of the E4C user. (The persona is included in Appendix G.) We will select test participants based on those characteristics.

Our general requirements for user characteristics include:

- Aged 25 to 65
- Practicing engineer
- Has registered, searched, and posted in forums within a website before
- Works with the Internet on a daily basis
- Motivated to give back to society and perform community service

Within this range, we believe there is a distinction between younger engineers (aged 25-35) and older engineers (aged 35+) based on comfort with web page navigation. However, we decided not to recruit a specific number from each subgroup; instead, we will attempt to recruit a participant pool that is distributed across the range of age brackets. This decision is based on a need for flexibility in the screening process.

The most important factor is that the participants are practicing engineers who are motivated to engage in community service and giving back to society. This motivation, as well as questions about experiences, demographic data, and other criteria, is included in our screening questionnaire (Appendix A) for recruiting the best test participants.
Methodology and Tasks
Usability testing on the E4C website will focus on concerns identified during the project kickoff meeting as well as the major and catastrophic issues raised during the heuristic evaluation. The tests will take place in the Southern Polytechnic State University (SPSU) student usability lab. We will test the website with six participants who meet the screening criteria. Two additional candidates will be recruited as alternate participants in the event of cancellations. The participants will be guided through a series of scenarios using the E4C website. Their responses will be recorded and documented in a final report. The participants will receive a $25 gift card from IEEE in consideration of their help.

Preparation
To prepare for our testing, we will conduct a walkthrough to practice our test plan and procedure with a “stand-in” test participant. This participant will be a tolerant user, someone unfamiliar with the E4C website, but not subject to the more rigid screening the test participants must pass.

The following week, we will conduct a pilot test with the guidance of Dr. Barnum. The pilot test will be conducted using the first of our recruited participants. If we do not have to make significant changes to the test protocol following the pilot, we will include the results in our final report.

Testing
The five remaining tests will be performed over the course of two days in the student lab without the assistance of Dr. Barnum. The first day will include three tests and documentation of our analysis. The second day will include two tests and the associated documentation. In the event of participant cancellations, the student lab has been reserved for a third day of testing.

Think aloud protocol
Participants will be asked to think aloud as they perform the tasks. They will be encouraged to say whatever they are looking at, thinking, doing, and feeling as they perform each task. This will enable our team to record the users’ actions, reactions, and thoughts as they work through the tasks.

Session length
Each session will last approximately one hour to complete the following components:

- Introduction and pre-test questionnaire (5 minutes)
- Scenarios, including a post-task questionnaire after each scenario (40 minutes)
- Closing, including standardized usability questions (SUS questions), product reaction card selections and explanations, and a final open-ended post-test question (10 minutes)
Questions, Tasks, and Scenarios

The following tables provide three types of information that will help guide our testing team during the analysis phase:

1. **Question**: The question we want answered based on your requests and concerns identified by our team during the heuristic evaluation.
2. **Task**: The task the participant should perform to answer the question.
3. **Scenario**: The scenario that we will provide to the participant during testing.

**Question, task, and scenario 1 (8 minutes)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Task</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetic and minimalist design: How does the look and feel of the site make users feel? Do they know what the site is and what it is for?</td>
<td>Getting a sense of the site purpose and ethos. Ask the user how the site makes them feel; what is the tone of this site? What is the purpose of this site?</td>
<td>Take a look around the home page of this website and tell us what you think about it, what you think you can do here, and where you would get started.</td>
</tr>
</tbody>
</table>
### Question

**Error prevention:**

Will users abandon the registration process if confronted with too many errors?

When they get the error message, do they understand what they did wrong after hitting submit?

Do they know how to correct the error?

### Task

Registering as a new user to determine if user can successfully navigate the login name and password requirements.

Correct choice is to follow the help text explicitly to create a secure password.

We will not provide login and passwords inputs. We can provide an email address. (Note: Set a maximum of 3 attempts. If user experiences 3 unsuccessful attempts, we will stop the user and thank them for what they showed us about the process of registering.)

### Scenario

You have decided to register on the site to see what added features become available to you. Do that now.
### Question
Flexibility and efficiency of use:

Can users find workspaces and other members they have previously aligned with?

### Task
Searching for a specific member and a workspace.

Correct choice is to go to the Members area and use the directory to find the specific user. Users may be confused by Search box and the hidden Members link under the E4C menu.

### Scenario
You meet Jay Jones at a conference and you’d like to collaborate with him on a project.

1. On the site, show how you would see whether Jay Jones has set up a project that you might like to be involved in.
2. Find a project set up by another engineer.
<table>
<thead>
<tr>
<th>Question</th>
<th>Task</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match between system and the real world:</td>
<td>Join a workspace.</td>
<td>You found your conference colleague, Jay Jones, and now you'd like to collaborate with him.</td>
</tr>
<tr>
<td>Are new users able to join a workspace easily?</td>
<td>Correct choice is to click Register Now button on the home page. Users may be confused as to what “Register” means and if it is the same thing as “joining.”</td>
<td>1. How would you do this?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. If you can’t find him, where would you go for assistance?</td>
</tr>
</tbody>
</table>

12/6/2012

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### Question, task, and scenario 5 (8 minutes)

<table>
<thead>
<tr>
<th><strong>Question</strong></th>
<th>Consistency and standards: Is the top-level navigation intuitive? Can users find the E4C resources hidden menu?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task</strong></td>
<td>Using the site’s top-level navigation to find the Solutions Library. Correct answer is to open the E4C top navigation bar and select Solutions Library. Users may not know to click the E4C button to find it.</td>
</tr>
<tr>
<td><strong>Scenario</strong></td>
<td>You would like to look at projects that other engineers have added to the site. How would you do this?</td>
</tr>
</tbody>
</table>
Testing Facility and Equipment

Facility information
The testing of the E4C website will be conducted on the Southern Polytechnic State University Campus located in Marietta, GA. The Atrium Building houses the student usability lab on its ground floor. The lab consists of an evaluation room and control room.

Evaluation room
The evaluation room is where the user will sit and perform the tasks revolving around the E4C site. The layout of the room imitates a home or professional office. A one-way mirror allows the team in the control room to observe the user while they perform tasks. The following equipment is in this room:

- Lenovo Think Centre running Windows 7 and Internet Explorer 8.0
- 19” monitor – A standard monitor
- 3 wall-mounted cameras and a digital desktop camera
- Microphone
- Telephone/intercom to control room

Control room
The control room will house the team members observing the user. The following equipment is in this room:

- A logging computer with Morae logging software
- Panasonic TVs that display feeds from the evaluation room cameras
- A phone/intercom if user requires assistance
- A DVD recording unit
- A Panasonic digital video mixer
# Project Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/21-31/2011</td>
<td></td>
<td></td>
<td>Recruit and screen participants</td>
</tr>
<tr>
<td>10/27/2011</td>
<td>Thursday</td>
<td>6:30 pm</td>
<td>Conduct walkthrough test with tolerant user</td>
</tr>
<tr>
<td>11/01/2011</td>
<td>Tuesday</td>
<td>6:15 pm</td>
<td>Conduct pilot test with screened participant</td>
</tr>
<tr>
<td>11/05/2011</td>
<td>Saturday</td>
<td>11:00 am-5:00 pm</td>
<td>Conduct user tests with three participants and debrief</td>
</tr>
<tr>
<td>11/06/2011</td>
<td>Sunday</td>
<td>11:00 am-5:00 pm</td>
<td>Conduct user tests with two participants, debrief, analyze, and document findings</td>
</tr>
<tr>
<td>11/12/2011</td>
<td>Saturday</td>
<td>12 noon-5:00 pm</td>
<td>Conduct alternate testing, if needed</td>
</tr>
<tr>
<td>12/6/2011</td>
<td>Tuesday</td>
<td>6:00 pm</td>
<td>Deliver final report and oral presentation</td>
</tr>
</tbody>
</table>
**Team Roles and Responsibilities:**
Each team member has been assigned one of the following roles during the usability tests.

**Moderator**
Jay Jones is the moderator, and as such interacts with the participant on test day. If the participant has a technical problem, Jay will pass the participant on to technical support.

**Technical support**
Brian Domit will provide technical support. He will ensure that the user hardware is operational prior to their arrival and will be available in the control room during the test to address hardware or software operational concerns. Brian will also begin, monitor, and end the DVD recording of each test session.

**Logger**
Nathan Atkins will perform all logger duties. From the control room, he will use the Morae software to mark the beginning and ending of each task, document the participant comments made during the test, document notable navigation choices, and deliver post-test System Usability Scale (SUS) questions to the participant computer. His notes will be supplemented by observations from the narrator.

*SUS questions are described further in the Evaluation Data section.*

**Narrator/Observer**
Laurie Bennett will take notes during the test separate from the logger. This additional information will include the time each participant takes to complete tasks, the participants' non-verbal reactions, and technical or procedural problems encountered by the participant or the team during each test.
Evaluation Data

Quantitative data
During each test, we will collect both quantitative and qualitative data. The quantitative data will provide measurable feedback based on users’ responses to questions asked throughout the test. Questionnaires, requiring participants to rank ease or difficulty, will be administered after each scenario, and at the end of the test. The first part of the post-test protocol includes administering System Usability Scale (SUS) questions.

SUS questions are a set of standardized questions used widely in usability studies. They ask the user to respond to questions by rating them on a scale of 1 to 5, where 1 is strongly disagree, and 5 is strongly agree. One example of an SUS question is, "I thought the system was easy to use". The full set of SUS questions is included in the Appendix of this document. The questions will be administered on the participants' computer screens by Morae, the logging software we plan to use. The team can see the participant responses from the control room, as well as listen to any comments the participants makes. Morae also scores the participants SUS test.

The benefit of using SUS questions is that the average SUS scores for all participants in the study can provide a baseline for comparison to other website usability studies or for future studies of this same site.

Qualitative data
We will collect qualitative feedback through observations during each test, including users’ remarks, non-verbal body language, and facial expressions. We will administer a pre-test questionnaire asking open-ended questions. We will also use post-test product reaction cards at the end of each test session allowing participants to convey their impression of the E4C user experience.

Product reaction cards are a set of 118 index-style cards each labeled with an emotional description, i.e., annoying, simplistic, or impressive. Participants will be asked to select any number of cards that resonated with them during the test. Using the cards takes very little time to administer and will return another layer of understanding of the users' experience. The questionnaire answers and product reaction card choices will provide preference data. The 118 card labels are provided in the Appendix of this document.

This combination of quantitative and qualitative data will inform the analysis to be presented in the final report and presentation.

Pre-test, post-task, and post-test questionnaires are included in the Appendix of this document.
Deliverables
This study concludes on December 6, 2011, with delivery of the following artifacts:

- A formal written report
- An oral presentation
- The presentation Power Point slides
- A 10-minute highlights video providing evidence of the findings

If, after reviewing the test recordings, presenting clips from multiple user sessions proves more insightful, we will replace the highlights video with shorter clips embedded in the Power Point slides.
Appendix E
Screening Questionnaire
Appendix A: Screening Questionnaire

Screener: Hello! May I have a moment of your time?

Yes – Proceed  No – Disengage

Screener: I am a student enrolled at Southern Polytechnic State University. I am working on an important project for a class revolving around Usability Testing. My team and I are recruiting engineers to test a website for engineers interested in community service projects, and I would like to hear your input. In consideration of your participation, we are providing a $25 Amazon Gift Card, for those who qualify and participate in the study. Would you be interested in participating?

Yes – Proceed  No – Disengage

Screener: Great, thank you. I need to ask you a few questions to see if you qualify for this study. Is that alright?

Yes- Proceed  No – Disengage

Screener: Great. First, are you an engineer?

Yes- Proceed  No – Disengage

Screener: What is your Engineering specialty?

Screener records information, then continues.

Screener: The study session is approximately an hour in length and will be scheduled during the weekend of November 5th-6th (Sat /Sun) between noon and 5:00pm. We will also be testing on Tuesday, November 1st from 6:30pm to 8:00pm. Are you able to attend any one of these sessions?

Yes – Proceed  No – Disengage

Screener: We are trying to choose participants that represent ages 25-65 years old. Do you mind telling me your age?

Screener records age, then continues.

Screener: Have you been involved in any community service work in the past on a volunteer basis?

Yes- Proceed  No – Disengage

Screener: What types of volunteer community service work were you involved in?

Screener records information, and then continues.

Screener: Did you use any websites while doing your volunteer community service?
Yes- Proceed  No – Disengage

**Screener:** Which websites did you use?

**Mentions E4C – Disengage**  **Does not mention E4C – Proceed**

*Screener records information, and then continues*

**Screener:** Thank you. During this testing, participants are recorded and videotaped. Would you allow us to videotape your session for research purposes as part of our study?

**Yes – Proceed**  **No – Disengage**

**Screener:** Thank you for speaking with me today. My team will review your responses. If you qualify for participation in our study, we will contact you to schedule a testing time within the next week. Which testing session would you prefer?

- [ ] Tuesday November 1  6:30pm
- [ ] Saturday November 5  12noon
- [ ] Saturday November 5  1:30pm
- [ ] Saturday November 5  3:00pm
- [ ] Sunday November 6  12noon
- [ ] Sunday November 6  1:30pm

Would you please provide your contact information so we reach you?

**Full name:**

**Email address:**

**Mobile phone:**

**Secondary phone:**

**SPSU Campus address if applicable:**

**Screener records gender as well.**

Please recall that in appreciation for your time, you will receive a $25 Amazon gift card for participating in the study. If you do not hear from us within the next week please know you have our thanks for your time.
Appendix F
Pre-Test Questionnaire
Appendix B: Pre-Test Questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Answer:

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.

Answer:

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.

Answer:

Screener: When looking for an organization to volunteer with, what information is most important to you?

Answer:

Screener: Think of one community service or charitable organization’s website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?

Answer:
Appendix G

Post-Task Questionnaires
Appendix C: Post-Task Questionnaires

Scenario 1
Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on why you think it will be particularly easy or difficult to use:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Scenario 2
Please rate your experience registering as a new member. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Scenario 3
Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Scenario 4
Please rate your experience joining a workspace. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
**Scenario 5**

Please rate your experience finding the solutions library. Circle one answer below.

1-Very difficult

2-Somewhat difficult

3-Neither difficult nor easy

4-Somewhat easy

5-Very easy

Please comment on what was particularly easy or difficult.

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________
Appendix H
Post-Test Questionnaires
Appendix D: Post-Test Questionnaires

SUS questionnaire

1. I think that I would like to use this system frequently.

2. I found the system unnecessarily complex.

3. I thought the system was easy to use.

4. I think that I would need the support of a technical person to be able to use this system.

5. I found the various functions in this system were well integrated.

6. I thought there was too much inconsistency in this system.

7. I would imagine that most people would learn to use this system very quickly.

8. I found the system very cumbersome to use.

9. I felt very confident using the system.

10. I needed to learn a lot of things before I could get going with this system.
### Product reaction cards

The following table contains all of the words used on the product reaction cards.

<table>
<thead>
<tr>
<th>The complete set of 118 Product Reaction Cards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessible</td>
</tr>
<tr>
<td>Advanced</td>
</tr>
<tr>
<td>Annoying</td>
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<tr>
<td>Appealing</td>
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<td>Approachable</td>
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<td>Attractive</td>
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<td>Boring</td>
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<td>Business-like</td>
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<td>Confusing</td>
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<tr>
<td>Connected</td>
</tr>
<tr>
<td>Consistent</td>
</tr>
<tr>
<td>Controllable</td>
</tr>
<tr>
<td>Convenient</td>
</tr>
</tbody>
</table>
Final post-test questionnaire
Now that you've had the opportunity to learn more about this site, please rate your impression of how
difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it
would be to use (answered after the first scenario) please comment on what may have changed your
impression:

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Appendix I
Moderator Script
Appendix E: Moderator Script

Introduction
Hi, my name is Jay Jones. I am a graduate student and a member of the Hufflepuff team in the Usability Testing class. I will guide you through the process today. First, if you need assistance at any time, feel free to ask. We appreciate you helping us understand how the site works for you, and we want you to be comfortable and relaxed. You’ll notice that I’ll be reading from this paper most of the time. This may seem strange or awkward, but we do this to ensure that we give the same information to everyone.

Cameras and videotaping permission
Let me show you where the cameras are in this room [point to the cameras]. They give the team several views of this area. Most of the time, the team will be looking at the screen you will be working on to see where you are clicking. Here is a microphone [point to the microphone], which will pick up your voice as you speak. We are asking your permission to videotape the session for research purposes, which will help us to go back and review what happened just in case we miss something in our notes. Please read this form [hand over the video release consent] and let me know if you have any questions or concerns. When you are done, please sign and date both copies at the bottom. Please keep one copy for your records.

Team introduction
Our team is on the other side of this mirror. This is a one-way mirror that allows the team to see what is going on in this room. Our team consists of four students. At the end of the study, if you’re comfortable with this, I’d like to introduce you to the team and to give them a chance to thank you for your participation.

Test introduction
I’ll explain now why we’ve asked you to come here today: we’re testing the Engineering for Change website to see what it is like for people to use it. I want to make clear right away that we’re testing the site, not you. We want to learn from you about what works well and what gives you problems with this website, so we need to know what you honestly think.

As we go along, I’m going to ask you to think out loud, to tell us what’s going through your mind. You may say something like “I am clicking on ...”, “I chose this option because...”, “I don’t like ....”, or “Oh, that’s right where I thought it would be.”

During most of the test, I’ll be sitting in the other room with the team. Before I go, I’ll hand you a task for you to perform. Read it out loud, and then begin the task. Once you’re finished with the task, please complete the post-task survey. I will then bring you your next task, and we’ll repeat.

Before we begin the first task, please complete this pre-test questionnaire. If you like, I’ll stay here, ask the questions, and write down your responses.

[Complete questionnaire]
Appendix J
Executed Video Permission Forms
Usability Center

Video Permission Form

I hereby give my permission to be video-taped as part of my participation as a user in the MealpayPlus.com Usability Test conducted on November, 3, 2009, at the Usability Center at Southern Polytechnic State University.

I understand and consent to the use and release of the video recording to the Usability Center and to the client. I further understand that the video recording and any highlights extracted from the recording may be used for review by the client and by the Usability Center. Representative video excerpts may also be used within presentations to the client, at professional meetings, and as part of research.

I relinquish any rights to the video recording and understand that the recording may be used for the purposes described in this release form without further permission.

I understand that if for any reason I do not want to continue I can leave at any time during this recording session.

Please sign both copies of this form. Keep one for your records and return the other to the test facilitator.

Print name

Signature

Date
I hereby give my permission to be video-taped as part of my participation as a user in the MealpayPlus.com Usability Test conducted on November, 3, 2009, at the Usability Center at Southern Polytechnic State University.

I understand and consent to the use and release of the video recording to the Usability Center and to the client. I further understand that the video recording and any highlights extracted from the recording may be used for review by the client and by the Usability Center. Representative video excerpts may also be used within presentations to the client, at professional meetings, and as part of research.

I relinquish any rights to the video recording and understand that the recording may be used for the purposes described in this release form without further permission.

I understand that if for any reason I do not want to continue I can leave at any time during this recording session.

Please sign both copies of this form. Keep one for your records and return the other to the test facilitator.

Print name: Christopher Lee Sanders
Signature: [Signature]
Date: 6 Nov 11
I hereby give my permission to be video-taped as part of my participation as a user in the MealpayPlus.com Usability Test conducted on November 3, 2009, at the Usability Center at Southern Polytechnic State University.

I understand and consent to the use and release of the video recording to the Usability Center and to the client. I further understand that the video recording and any highlights extracted from the recording may be used for review by the client and by the Usability Center. Representative video excerpts may also be used within presentations to the client, at professional meetings, and as part of research.

I relinquish any rights to the video recording and understand that the recording may be used for the purposes described in this release form without further permission.

I understand that if for any reason I do not want to continue I can leave at any time during this recording session.

Please sign both copies of this form. Keep one for your records and return the other to the test facilitator.

Print name: [Signature]
Date: 11/6/11
Video Permission Form

I hereby give my permission to be video-taped as part of my participation as a user in the E4C Usability Test conducted at the Usability Center at Southern Polytechnic State University.

I understand and consent to the use and release of the video recording to the Usability Center and to the client. Further, I understand that the video recording and any highlights extracted from the recording may be used for review by the client and by the Usability Center. Representative video excerpts may also be used within presentations to the client, at professional meetings, and as part of research.

I relinquish any rights to the video recording and understand that the recording may be used for the purposes described in this release form without further permission.

I understand that if for any reason I do not want to continue I can leave at any time during this recording session.

Please sign both copies of this form. Keep one for your records and return the other to the test facilitator.

Print name: [Signature: [Date: 12/6/2012]
Usability Center

Video Permission Form

I hereby give my permission to be video-taped as part of my participation as a user in the E4C Usability Test conducted at the Usability Center at Southern Polytechnic State University.

I understand and consent to the use and release of the video recording to the Usability Center and to the client. I further understand that the video recording and any highlights extracted from the recording may be used for review by the client and by the Usability Center. Representative video excerpts may also be used within presentations to the client, at professional meetings, and as part of research.

I relinquish any rights to the video recording and understand that the recording may be used for the purposes described in this release form without further permission.

I understand that if for any reason I do not want to continue I can leave at any time during this recording session.

Please sign both copies of this form. Keep one for your records and return the other to the test facilitator.

Print name

Signature

Date

12/6/2012
Appendix K
Participant Responses to Questionnaires
Pre-Test questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.
Answer: Yes. Some sites, can't find what you're looking for. Even search doesn't help.

Yes. Some sites, can't find what you're looking for. Even search doesn't help.

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.


Screener: When looking for a organization to volunteer with, what information is most important to you?

Answer: What their goal is. What they're trying to do and how I can help.

What their goal is. What they're trying to do and how I can help.

Screener: Think of one community service or charitable organization's website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?

Answer: I've never been to a volunteer site, but I have used my school's website.
Post-Task questions, scenario 1
Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on why you think it will be particularly easy or difficult to use:

Everything's easy to find. Nothing is hidden. Scrolling down @bottom, received an error message.
Post-Task questions, scenario 2

Please rate your experience registering as a new member. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

Password registration is tricky and confusing.
The instructions coming after the box is confusing.
Post-Task questions, scenario 3

Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Circle one answer below.

Please comment on what was particularly easy or difficult:

Typed in Jay Jones, and it came right up. When I get to workplaces, I could find it easily. I would not have clicked E4C Resources.
Post-Task questions, scenario 4

Please rate your experience joining a workspace. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

The way names are listed on the Members page is confusing. Listing by user name is confusing.
Post-Task questions, scenario 5
Please rate your experience finding the solutions library. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult.

______________________________

______________________________

______________________________

______________________________

______________________________
Final Post-test Questionnaire

Now that you've had the opportunity to learn more about this site, please rate your impression of how difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it would be to use (answered after the first scenario) please comment on what may have changed your impression:

__________________________________________
__________________________________________
__________________________________________
__________________________________________
Pre-Test questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.

Answer: Yes. I leave when I can't get what I need. If I'm trying to find a part, and I can't find it right away, I leave.

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.

Answer: Yes. Good organization tells me they are competent at what they do. The search feature must be good. If you can't find what you need, you won't use it.

Screener: When looking for a organization to volunteer with, what information is most important to you?

Answer: I want to know who I'm helping and what I will be doing. How is what I'm doing going to help people?

Screener: Think of one community service or charitable organization's website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?

Answer:

Atlanta Area Council of Boy Scouts of America. I am an Eagle Scout. Their site has tabs at the beginning that show where you are and are audience specific. There's info for boys, info for volunteers, and a calendar of events that is very helpful.
Post-Task questions, scenario 1

Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on why you think it will be particularly easy or difficult to use:

- Easy to learn what E4C is about
- Easy to post on bulletin boards

Easy to learn what E4C is about.
Easy to post on bulletin boards.
Post-Task questions, scenario 2

Please rate your experience registering as a new member. Circle one answer below.

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult:

Easy: page not cluttered or long.
One page at a time.
Registration page: Difficult. I was required to re-read password restrictions.
but I understand the need for the security because members might enter financial info.
Post-Task questions, scenario 3

Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

I didn't see tabs. Needs a tab that says "Members." Couldn't find a Contact Us. I never found a project.
Post-Task questions, scenario 4

Please rate your experience joining a workspace. Circle one answer below.

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult:

I couldn't get to a list of workspaces.
Couldn't get to a workspace from the profile.
Post-Task questions, scenario 5

Please rate your experience finding the solutions library. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult.

- I never used the SL button
- Solution for login or region

I never used/saw the Solutions Library button.
Final Post-test Questionnaire

Now that you've had the opportunity to learn more about this site, please rate your impression of how difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it would be to use (answered after the first scenario) please comment on what may have changed your impression:

The site needs some work. Finding a project is difficult. I like the Google Map. Site doesn't seem "done" yet, but the capabilities are there. Couldn't find projects for specific people. It's a lot better than what I expected from a non profit. Competent and useful staff. IEEE--makes me feel at home. They should know what they are talking about.

Product Reaction Cards:
Valuable
Intuitive: mostly
Optimistic: Pictures depict positive things. Anyone can do this. I can help this girl.
Engaging: It did engage me. Things I could read, but I didn't have to read them.
Pre-Test questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.
Answer: Yes, not very useful info. Ga State site. (Georgia State University)

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.
Answer: yes. Google, etc. Engineering toolbox. Able to search easily.

Screener: When looking for an organization to volunteer with, what information is most important to you?
Answer: Location. Is it local? Timeframe. Cause. Must be useful project.

Screener: Think of one community service or charitable organization’s website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?
Answer: Habitat for Humanity. Hard to know when they were doing their sale.
Post-Task questions, scenario 1

Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1- Very difficult
2- Somewhat difficult
3- Neither difficult nor easy
4- Somewhat easy
5- Very easy

Please comment on why you think it will be particularly easy or difficult to use:

Unclear information on what their site is their to do.
Not geared to contributors.
Join Here. Why would I do that?
Post-Task questions, scenario 2

Please rate your experience registering as a new member. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

- Not certain about location.
- It didn't say city/state.

Not certain about location.
It didn't say city/state.
Post-Task questions, scenario 3
Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

Projects are called Workspaces.
As an engineer, we call them projects.
Post-Task questions, scenario 4

Please rate your experience joining a workspace. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

Impossible to complete task. No way to join workspace on a workspace page.
Please rate your experience finding the solutions library. Circle one answer below.

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult.

Impossible at first because of error. Internal Server Error. Want around the other way. Fairly useful.
Final Post-test Questionnaire

Now that you’ve had the opportunity to learn more about this site, please rate your impression of how difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it would be to use (answered after the first scenario) please comment on what may have changed your impression:

- Good content: I’d like to come back to it and read it.
- Server and script errors: Needs content organization.
- It was cumbersome, but not extremely cumbersome.
- Needed to learn what a “workspace” is.
- Should be organized better, but content is good.

Product Reaction Cards:
Innovative: haven’t seen something like this.
Difficult.
Hard to use.
Entertaining: solar project--attached files--entertaining.
Pre-Test questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.
Answer: 

The results are different that you'd expect. Changing layout.

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.
Answer: 

Yes. consistent features/form/functions. Acts intuitively.

Screener: When looking for a organization to volunteer with, what information is most important to you?
Answer: 

Mission Statement. What's it all about?

Screener: Think of one community service or charitable organization's website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?
Answer: 

2 a Cure.
Collects funds. Pertinent info and versatile.
Cons: Wasn't specific to me.
Post-Task questions, scenario 1

Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1-Very difficult

2-Somewhat difficult

3-Neither difficult nor easy

4-Somewhat easy

5-Very easy

Please comment on why you think it will be particularly easy or difficult to use:

- Segments/Org is easy to understand.
- Did not like first paragraph; forced me to read to understand what to do.
- Images refresh too often.
- Should be able to control/stop the images.
- Just clicked the start button.
Post-Task questions, scenario 2
Please rate your experience registering as a new member. Circle one answer below.

1 - Very difficult
2 - Somewhat difficult
3 - Neither difficult nor easy
4 - Somewhat easy
5 - Very easy

Please comment on what was particularly easy or difficult:

- Reading of the password requirements—jammed together.
- An image would be better (lock, etc.)
- Seemed very high for a charity site.
Post-Task questions, scenario 3
Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult:

- **Difficult:** Task has keyword that don't match the screen.
- Hidden menus are difficult.
- Hate using search bar.
Post-Task questions, scenario 4

Please rate your experience joining a workspace. Circle one answer below.

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult:

[Handwritten comment]

List of members is very expanded.
Need to go through 20 pages to get to the person.
Should be more like Facebook.
Profile page is straight forward.
Post-Task questions, scenario 5
Please rate your experience finding the solutions library. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult.

- Icons and color contrast are good.
- Some confusion with labeling.
- Pushed me to join after I made an error, which is good.
- Folders are intuitive.
Final Post-test Questionnaire

Now that you've had the opportunity to learn more about this site, please rate your impression of how difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it would be to use (answered after the first scenario) please comment on what may have changed your impression:

Lots of good things.
It needs this testing.
Some of it is not intuitive.

Product Reaction Cards:
Inconsistent: not industry standard. New features (sliding menu) are disruptive.
High Quality.
Flexible: more than 1 way to get to multiple places.
Disruptive: Too many items on 1 page.
Pre-Test questionnaire

Screener: Thank you for participating in our usability test. Your participation will provide valuable feedback for our study. Before we start testing, I would like to ask you a few questions about your experience with the Internet and other community service organizations.

Screener: Have you ever been particularly frustrated by a website? Why? Describe that experience.

Answer: AT&T not intuitive

AT&T not intuitive

Screener: Have you ever been particularly pleased by a website? Why? Describe that experience.

Answer: Charles Schwab very easy to use

Charles Schwab very easy to use intuitive

Screener: When looking for an organization to volunteer with, what information is most important to you?

Answer: Background or the organization.

Background of the organization.

Screener: Think of one community service or charitable organization's website that you have visited. What did you like about it? How did you use it? Would you mind showing us the site?

Answer: N/A
Post-Task questions, scenario 1

Please rate your impression of how difficult or easy you think this site will be to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on why you think it will be particularly easy or difficult to use:

Tabs are easy to use.
Links are self explanatory.
Post-Task questions, scenario 2
Please rate your experience registering as a new member. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

Password too secure. Seems unnecessary. Not intuitive--forced to read instructions.
Post-Task questions, scenario 3
Please rate your experience searching for Jay Jones, his workspaces, and the workspaces of additional engineers. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult:

Looking for a line that said "Members" but I didn't see it.
I was forced to use Search.
Post-Task questions, scenario 4

Please rate your experience joining a workspace. Circle one answer below:

1. Very difficult
2. Somewhat difficult
3. Neither difficult nor easy
4. Somewhat easy
5. Very easy

Please comment on what was particularly easy or difficult:

[Response]

Once you end the member everything else is self explanatory from there.
Post-Task questions, scenario 5
Please rate your experience finding the solutions library. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

Please comment on what was particularly easy or difficult.

Once you find the member it's easy to navigate the workspace.

______________________________________________________________
Final Post-test Questionnaire

Now that you've had the opportunity to learn more about this site, please rate your impression of how difficult or easy this site is to use. Circle one answer below.

1-Very difficult
2-Somewhat difficult
3-Neither difficult nor easy
4-Somewhat easy
5-Very easy

If your actual experience using the site differed from your initial impression of how easy or difficult it would be to use (answered after the first scenario) please comment on what may have changed your impression:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Product Reaction Cards:
Simplistic: Easy to use: Easy to find info. Finding member should be on first page.
Predictable: You know what you are going to get.
Meaningful: Site has meaningful purpose.
Appendix L
Logger Files for each Participant
<table>
<thead>
<tr>
<th>Time</th>
<th>Note</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:16.8</td>
<td>Task On starts</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:14.8</td>
<td>Sees it is the home page</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:22.2</td>
<td>The first place he looked was the register now button</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:32.1</td>
<td>He thinks that before he does that he would go through the photos and explore</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:44.4</td>
<td>He also thinks the picture are moving to fast. Would like to pause the pictures.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>05:13.9</td>
<td>Scrolls up and down to see what the website looks like</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:01.4</td>
<td>What do you think a person would do on this site? He would have to go through all the different projects.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:22.6</td>
<td>Clicked on water, and then went through all the items about water.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:32.6</td>
<td>If you stayed on the homepage what would be your impression of what it is for? Jay</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:46.8</td>
<td>He thinks that it would be a place to be able to get in touch and look up news about the different projects.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:03.8</td>
<td>Seems to be a way to change communities through engineering.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:13.4</td>
<td>Seems that I can go through her to read news and workspaces of other engineers.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:30.0</td>
<td>You can obviously read what type of projects are going on.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:51.2</td>
<td>If you are a normal user of the website you could find some good information.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:02.5</td>
<td>If I was coming here on purpose to join it looks like VERY easy access to join.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:26.6</td>
<td>He has not been to a site in a while for charity, but he likes the ease of the E4C site.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:26.6</td>
<td>The scripting error happens at the map.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:16.2</td>
<td>START task two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>14:16.6</td>
<td>User has question about the login is he using the right email.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:16.2</td>
<td>He went through the login part easy</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:23.4</td>
<td>He paused at the passowsrd checkin place does not like it</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:35.6</td>
<td>He password entry was done incorrectly needs to reenter as it was too short.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:52.0</td>
<td>He again had to type in the password security bot checker and was exasperated.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:27.2</td>
<td>he registred after two times.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:38.0</td>
<td>End task two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:11.2</td>
<td>He was defensive body posture after the task. Shortly after he did this he talked about the bot.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:42.8</td>
<td>He also did not understand the mapping and the location.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:58.4</td>
<td>Start Task Three</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:25.8</td>
<td>He went back to the home page.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:33.4</td>
<td>He went to the search and typed in jay jones</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:51.2</td>
<td>He found one search item on jay jones being a member.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:09.0</td>
<td>He is clicking on workspaces.</td>
<td>Hufflepuff Team</td>
</tr>
</tbody>
</table>
19:16.8 It found the spsu ux
19:24.0 He then began to look for a project started by another engineer.
20:04.2 He went straight to the workspaces in order to find their authors. And this way he can find oth
22:28.2 Start task 4
22:33.4 Id he could not find Jay Jones he would go back to the member section.
23:07.8 Clicks on the alabet tool bar. Clicked on Jay
23:20.8 He had to search for a ehile going thorough several lists.
23:50.4 Still searching. The member directory is rough to go through.
24:12.8 End task 4
24:30.2 the way all the names were listed was confusing. The first name you see is their user name no!
25:18.4 Start task 5
25:28.8 He is going back to the homepage to start over.
25:48.8 went through the resources bar on the second home screen icon.
25:59.8 He noticed that there are no workspaces open so he is going to find some.
26:13.2 He then is goign to search member population for interest. So he determines what interests h
27:43.4 End Task 5
27:58.0 What was your descision making process?
28:08.8 After looking at the previous test the workspace is brings you to the projects. He looked fro wh
29:17.8 It is was very easy for him to find the resources page.
32:15.0 The user is picking the cards now
34:49.6
<table>
<thead>
<tr>
<th>Time</th>
<th>Note</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:01.6</td>
<td>Begin Task One</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:18.0</td>
<td>Reads the website. He wants to read about what change it is.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:42.6</td>
<td>Indfosystems is a weird word</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>11:13.9</td>
<td>This was found in the menu bar</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>11:30.4</td>
<td>He is squinting at the screen</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>11:36.2</td>
<td>Sees sign up and register</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:10.3</td>
<td>Does not know if he wants to give his website yet</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:20.2</td>
<td>Oh cool, he likes the map</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:44.0</td>
<td>He has a question...the script on the page error.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:00.4</td>
<td>End Task 1</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:07.0</td>
<td>Standard format, looks like it is going to be easy to use here...very.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>14:30.2</td>
<td>It is going to be easy to learn about what they are about and then apply it.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:09.8</td>
<td>Start Task 2</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:44.9</td>
<td>the register is in the correct place.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:03.0</td>
<td>He is blowing through the fields.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:12.8</td>
<td>His location field is ambiguous to him</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:26.8</td>
<td>google maps is unable to find him</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:34.0</td>
<td>He had trouble with the bot protection area.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:04.6</td>
<td>password was too short.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:00.6</td>
<td>Is not having an easy time registering and is having a body language of frustration. Sitting back and grimacing.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:27.4</td>
<td>The field for the password entry is not striking.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:55.0</td>
<td>Took three times.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>20:58.2</td>
<td>Agrees with the restrictions about the password entry</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>21:14.4</td>
<td>Does not like the bot protection]</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>21:37.6</td>
<td>Begin Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>21:42.8</td>
<td>Script came up</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>21:56.6</td>
<td>Where is staff or contact.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:03.8</td>
<td>Looks for a support team</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:10.0</td>
<td>Went to contact came up with outlooks</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:22.2</td>
<td>Then he went to search</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:30.8</td>
<td>The went to Jay Jones</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:45.0</td>
<td>Looked around on the Jay Jones site. He joined on his birthday.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>23:11.4</td>
<td>Clicked on the link to find out what Jay does.</td>
<td>Hufflepuff Team</td>
</tr>
</tbody>
</table>
23:22.8 I don't know how to collaborate with Jay Jones.
24:02.0 Stated to check all of the links and menus to try and find out how.
24:37.4 Found members screen finally on the second menu bar
24:50.0 now he is scrolling through the J menus and trying to find Jay Jones again.
25:31.8 End Task Two
26:37.2 He thought finding Jay Jones was a 3.
26:54.2 He was scared when the outlook window opened b/c that is indicative of having a hard time.
27:20.3 He never found a project that Jay Jones was working on.
27:50.0 Begin task three
27:56.4 He goes to the search menu immediately
28:06.2 He went to jay jones
28:10.8 It would have been nice if he could have contacted him on linked in. He is not enthused with twitter.
28:45.6 He might want to read up more on him so he likes the website
28:58.6 he also likes the fact that the phone number is on there too.
29:13.2 He really would just like to email him. It is not good that there is not an email dress.
29:30.4 Good looking website but no email? Why?
29:44.2 someone in a n0pther country could set this up just as easy.
29:59.2 went to axel. He then found another engineer in the A’s. He liked it because they work with AEEE
30:31.4 Where is my help button?
30:36.6 JJ - Say you want to use the site to work on a project with JJ jones.
31:30.2 He is confused because he never found a project that Jay was working on.
31:42.2 Profile page, when I think of profile page I think of brief two line descriptions would be great.
32:02.6 As far as collaborating with JJ I want to know that I am helping so I want to see the personal experiences of the perso
32:28.4 Again it was hard not having an email address.
32:56.0 Again he wants to be able to easily see what projects he could find. He was not able to do that.
33:17.6 Workspace button to him suggests a complicated website.
33:30.0 There is not a workspace button on the top of the website.
33:41.8 could not get to a list of workspaces from the main website. <glad we made that change>
34:28.2 spent too much time looking around and so would have left the website.
34:39.2 Task Five
35:26.2 I would love to make some money at the same time so I am going to go to energy.
35:43.4 Just wants to find some projects.
35:50.8 He wants to particularly work on case studies.
36:16.2 He read the tag line to the energy page.
36:27.2 He is intrigued by the tag line and the energy page.
37:07.0 These are projects. He likes the solar solution for rural health centers.
38:13.2 end task
38:16.0 .
38:39.2 did not know if the solutions library was solutions to helping him with the website or if it was solutions to projects.
40:06.0 SUS questions
40:40.4 He liked the google map. The capability of it is not quite there yet. This b/c of the script error.
41:09.2 .
41:21.2 Did not think there was too much inconsistency just could not consistently find projects....
43:03.8 User went to get the cards
45:36.0 Wish there was a card that said high maintenance. Meaning that the site was updated repeatedly on a daily basis.
46:53.8 Intrigued to look at the site further.
47:11.2 Likes the pictures
47:15.6 The site is mostly intuitive]
49:36.2 He likes that the audience is primarily engineers. So they will understand what he posts should he decide to post.
50:34.2 He would like a button on the top or the bottom that states a members area.
50:53.0 Other than by using the search bar he has no other way to do it.
51:22.0 He JUST now found the secondary window.
52:51.8 He did not even see the workspaces rea in Jay Jones. He actually clicked on the test workspace he had no idea he was...
<table>
<thead>
<tr>
<th>Time</th>
<th>Note</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>03:25.6</td>
<td>Pre Test Questions Start</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>03:57.0</td>
<td>Mostly education sites. State run websites. Are the websites that give him the most trouble.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:59.6</td>
<td>Usually it is content and information that attracts him to a site.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>05:30.4</td>
<td>Search functionality of a site is important to him.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:18.4</td>
<td>Begin Task One</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:10.2</td>
<td>Reads the web site</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:19.0</td>
<td>He looks confused.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:38.0</td>
<td>He sees news he sees recent workspaces</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:45.2</td>
<td>does not seem very local to him</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:50.8</td>
<td>wonders if there is a way to contribute from the place if he is not there</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>09:09.4</td>
<td>the script is not working very well becuas a script error comes up</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>09:26.2</td>
<td>tired to use the map fuction.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>09:40.6</td>
<td>As the map gets closer in he gets closer to the screen.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:11.0</td>
<td>It would be nice if he could get in to the map with out using it. go directly to a region for exam</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:50.0</td>
<td>end task one</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>11:33.0</td>
<td>He wants to know whay he came to the site. What is the site for.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:05.2</td>
<td>He thinks it might be learning about other cultures.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:24.6</td>
<td>Maybe becoming part of a ciommunity to support a cause. He is fixated on the map to figure c</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:43.2</td>
<td>Doed not seem to say what he is joining when the join here button is there. Is it monetarily, or Hufflepuff Team</td>
<td></td>
</tr>
<tr>
<td>14:03.0</td>
<td>Begin Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>14:54.8</td>
<td>Keeps having trouble with the script running issue\</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:08.6</td>
<td>Went straight to the registering function.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:09.4</td>
<td>the map function gave him trouble</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:45.8</td>
<td>Got through registration correctly the first time.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:54.2</td>
<td>End Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:24.1</td>
<td>went straight to the search bar</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:34.0</td>
<td>found jay jones</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:04.6</td>
<td>He has no idea hiow to find workspaces even though it is there.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:29.8</td>
<td>he now begins to look for another engineer.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:59.2</td>
<td>members is already open becuae he went straight to a workspace from Jay Jones</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>20:11.4</td>
<td>Found another engineer immediately</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>20:53.7</td>
<td>End Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>22:08.0</td>
<td>It would have been easier to call it a project in stead of a workspace</td>
<td>Hufflepuff Team</td>
</tr>
</tbody>
</table>
22:18.8 begin task three  
22:49.2 he went into the search engine to find jay jones  
23:18.6 no email address and would like that.  
23:25.6 even though there is a phone number he would prefer and email adress.  
23:46.0 end Task three  
25:00.4 He again could not jkoin the workspace because the button is small and says help me join this  
25:45.2 begin task four  
26:03.0 So he clicked on health  
26:23.0 then he went to view all workspaces  
26:40.6 this is dissapointing.  
27:05.4 I would like to be able to view them all  
27:19.6 I like when they have the little bar about the subtitles  
27:34.8 He has now looked a project  
27:49.8 NOW he sees that he is able to find workspaces. He is teaching himself.  
28:21.8 End Task Four  
28:49.8 He feels that there is an error on the website.  
29:04.6 He was wanting to go directly through a single workspace function to find workspaces but coul  
29:26.4 .  
30:15.2 SUS Questions  
30:19.0 I think that it has good content.  
30:56.8 He likes that there is a variety of methods to get places.  
31:07.8 He does not like the server script error.  
31:18.8 He thinks it could be formatted to tell you what the differing types of information you can get  
33:13.2 Finds that the site was cumbersome.  
33:33.8 I need to lean a ot of things before I can use this system  
33:43.6 I would call it something different than a workspace. Again the main page should saw what th  
34:06.8 Begin Cards  
36:28.6 Inventive: He likes that there are not many charity sites for eng.  
38:09.0 begin post task questions  
38:16.4 He would expect better from a website. As far as telling him what they need.
03:26.0 Pre Task Questions
Hufflepuff Participant 5
03:32.2 Does not like it when web sites do what you do not expect.
Hufflepuff Team
04:47.0 Mission statements are important to him and is the first thing he looks at.
Hufflepuff Team
05:57.8 Begin Task One
Hufflepuff Team
06:13.3 Reads the title of the page, and rmarks on pictures. Tries to determine what the site is about f
Hufflepuff Team
06:47.5 It's a human effort of infomercial.
Hufflepuff Team
06:59.7 Kinda lost already. He has to read a ot to figure out what the site is about. Does not know wh
Hufflepuff Team
07:40.0 The pictures pictures and the boxes on the left are chaging to fast . I dont like that at all.
Hufflepuff Team
08:11.2 What are you doing on this site. I have no idea.
Hufflepuff Team
08:37.8 NOW he sees the map. He sees the bullentin board link and says he is happy to see that.
Hufflepuff Team
09:08.4 He went into the energy section to explore. He does not know what he is supposed to do
Hufflepuff Team
09:22.8 Maybe he is not "that type" of volunteers
Hufflepuff Team
09:32.0 It is realativity clean which is good
Hufflepuff Team
09:38.2 He thinks you should be able to know what it is about by the pictures.
Hufflepuff Team
09:58.2 He encountered the scripting error
Hufflepuff Team
10:05.4 End Task One
Hufflepuff Team
10:27.0 He placed the site at a 3 on easy to use
Hufflepuff Team
10:38.3 He thinks the segregations of areas of interest are easy.
Hufflepuff Team
10:52.1 He does not like the paragraph that tells you about the mission statement. It is too long and t
Hufflepuff Team
11:07.0 You should be able to tell from a picture or symbol to tell you what it is about.
Hufflepuff Team
11:18.6 He does not like the changing pictures. They should change when he tells them too.
Hufflepuff Team
11:29.8 The page breaks from style when you scroll down into a journal type, and then a map. Not su
Hufflepuff Team
11:52.6 Going back to the pictures he tried to stop them. He tried to click on them to control them is h
Hufflepuff Team
12:18.0 He expected it to work like yahoo news.
Hufflepuff Team
12:26.8 Begin Task two
Hufflepuff Team
13:08.2 Very common forum to register. Likes how it is organized.
Hufflepuff Team
13:22.2 Easy for him to understand.
Hufflepuff Team
13:57.0 He has to scroll down to read everything. Sometimes when he has registered it has all been th
Hufflepuff Team
14:15.0 He actually read the instructions. He sees them. Says this outloud.
Hufflepuff Team
15:00.0 He can never do a bot thinkg on the first try does not like them.
Hufflepuff Team
15:12.8 Failed his first attempt and screwed up the passowrd. His words.
Hufflepuff Team
15:42.4 He retypes the bot password and hates it.
Hufflepuff Team
15:56.4 End Task Two.
Hufflepuff Team
16:31.6 He does not like the reading of the password requirements.  
16:42.0 He would like a symbol to show you how strong the password is. Like a lock or a key. And more Hufflepuff Team  
17:01.2 Seems very high to log in for a charity website. This one seems unusually strong.  
17:19.4 Begin Task three.  
18:10.4 He is taking a bit to find the user area.  
18:21.0 He would like to see a footer as well as a header all on the same page.  
18:32.4 He scrolled down to the map.  
18:53.2 Found him through the search function.  
19:04.4 Not a fan of the google searches. They never work well. It is powered by google.  
19:38.8 He has a website and a workspace.  
19:53.7 Went back to all members. Then went back to the homepage.  
20:35.2 He would have expected to see the whole other row of buttons that he would have liked in a ... Hufflepuff Team  
20:56.4 Does not like this.  
21:10.0 End Task Three  
21:48.2 He feels that this was very difficult. The task has keywords that do not match anything. He had Hufflepuff Team  
22:12.6 Specifically he did not like the fact that the second menu is hidden and he had to go through th Hufflepuff Team  
22:28.8 What if there had been multiple Jay Jones?  
23:14.5 Start Task Four  
23:35.2 He goes straight to J for jones. In the alpha search.  
23:45.6 That is going to take a while to scroll through each J page till I get to jones.  
23:58.0 He decides to go through the search feature. Again though he does not like having to do this. Hufflepuff Team  
24:25.6 He wants an email to be able to collaborate with him. Not a phone number or a website. Hufflepuff Team  
24:52.2 He then went into the search menu to find a random member.  
25:12.2 End Task Four  
25:20.0 Thinks it is somewhat difficult. The biggest concern is the list of members is too large, and it w Hufflepuff Team  
25:40.2 Was expecting a way to type the name there and then watch the list shrink. Like on FB when y Hufflepuff Team  
26:13.2 Likes how the user page looks like a profile.  
26:28.8 Begin Task Five  
27:09.2 He is going to say to go to the workspaces area since he found it by accident the last time. Hufflepuff Team  
27:40.4 He then went to the energy workspaces  
27:58.8 Least recent what does that mean? That is backwards from the forums.  
28:15.2 He thinks that he would go to least members cause they would need the most help. Hufflepuff Team  
28:37.0 His eyes went to the how to get started.  
29:02.4 He guesses it is like a file server?
29:52.2 He managed to join a workspace and that let him collaborate
30:14.2 End task five.
30:30.8 He likes the color contrast on the how to get started button. He did not know though where t
30:49.4 It pushed him to join when he wanted to join. He liked that.
31:06.2 He feels that the workspace flow is intuitive.
31:17.4 Begin SUS
31:49.2 1: He thinks he would if he was volunteering
32:03.4 2: I agree. I think there is a lot of clutter on the front page that you could find elsewhere.
32:18.6 3: Once you get going it is fine....after ten mins.
32:30.0 4: Easy to use after you get it.
32:45.4 5: In some modules yes. He had to "cheat" to use the search box.
33:08.8 6: It was consistently inconsistent.
33:33.6 7: It depends I think I have an advantage. Mostly because I use this allot.
33:53.0 8: Fairly "light" system.
34:02.8 9: did not know what he was doing and why he was there. Not until we gave him tasks.
34:27.4 10: Not so much.
34:32.8 Begin Cards.
36:10.8 He picked high quality b/c the layout and coloring is good. Someone spent some money. Has c
36:46.2 He picked flexible because of the back doors.
37:03.4 Liked how he was led to buttons he had not seen.
37:17.6 Inconsistent from the industry. There are some new features. Once you figure it out not so ba
37:36.8 Would have expected those things to be the top ten in a drop down menu. Did not like the ho
38:00.4 He did not like how the homepages organization changes as you go down.
38:12.8 Picked disruptive because of the pictures, and the speed, and the differing types of formats in
39:08.4 The site has not been brain tested to what is natural.
11/8/2011

Hufflepuff Participant 6 Christian Franco

<table>
<thead>
<tr>
<th>Time</th>
<th>Note</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>01:59.2</td>
<td>Begin pretask questionnaire</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>04:58.8</td>
<td>At&amp;T because the website was not intuitive. Things were not were you would expect them to</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>05:32.8</td>
<td>Charles Schwab. Everything there is easy to use and everything pops out.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:21.8</td>
<td>If he was going to volunteer he would look for background information on the org.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>06:59.0</td>
<td>Begin Task One</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:25.6</td>
<td>Stares at the page for a while trying to figure it out.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>07:38.1</td>
<td>He is thinking that this is a site that is geared to get folks involved in different types of engineers.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:00.4</td>
<td>You can become a member, and he sees the different areas like water and energy.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:30.2</td>
<td>Is like a forum?</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>08:35.0</td>
<td>His initial observation of the site would be that it would be to gain information and perhaps collaborate with other engineers is what he means by connect.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>09:33.9</td>
<td>To collaborate with other engineers is what he means by connect.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>09:49.2</td>
<td>End Task One</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>10:11.8</td>
<td>The website is not hard, and it is pretty easy to see.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>11:32.0</td>
<td>Begin Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>12:36.9</td>
<td>He is looking to see where to stop. For some reason it is not popping out where to go.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:19.8</td>
<td>User figured out how to sign out previous user fast.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>13:56.6</td>
<td>User seemed to have no problem with the box area.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>14:11.6</td>
<td>Second time through begins. He totally missed the instructions. He says this.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>14:37.0</td>
<td>He then kept having to retype till he got it.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:13.8</td>
<td>End Task One</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>15:54.8</td>
<td>The only thing he hates about password is when you have to use special characters and so long.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:21.2</td>
<td>Too much security.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:32.4</td>
<td>He does not like to take the time to read instructions.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>16:44.6</td>
<td>Begin Task Two</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>17:20.2</td>
<td>He is unable to find where to go for members.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:05.3</td>
<td>This is not coming to him as easy. He does not know how to find a member.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:17.8</td>
<td>He thought there would be a link to see other members</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:27.6</td>
<td>He is not seeing one.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:31.6</td>
<td>Maybe under bulletin board.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:50.8</td>
<td>He too went to the search for Jay Jones</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>18:57.2</td>
<td>Well I guess that works</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:17.0</td>
<td>He found the workspace easy.</td>
<td>Hufflepuff Team</td>
</tr>
<tr>
<td>19:34.6</td>
<td>End of Task Two</td>
<td>Hufflepuff Team</td>
</tr>
</tbody>
</table>
20:04.6 He was looking for something. He did not see this link <the one that is on the homeb=aoge buiHufflepuff Team
20:24.8 When you go through the member search in the search area it takes you straight to the membHufflepuff Team
20:40.2 makes the secondary bar come up. HE noticed that it was different but STILL cannot figure out Hufflepuff Team
21:05.0 Start Task Three
21:41.2 Now he does know how to find members you search for them in the search bar. Hufflepuff Team
22:18.6 He found the workspace quickly and found the join this workspace. Hufflepuff Team
22:33.0 He got into the type of discussion and chooses the whiteboard space function. Hufflepuff Team
23:05.4 End Task Three.
24:15.0 Begin Task Four
24:20.4 He went to the members tab. Hufflepuff Team
25:10.8 He went straight in to the other members. Hufflepuff Team
25:33.2 He felt it was very easy b/c once you have found the members you are able to go to other men Hufflepuff Team
26:05.4 Begin task Five
27:36.2 Begin SUS
27:40.0 Interestingly he thought the site was easy. Hufflepuff Team
29:05.1 Begin cards.
30:19.0 Again thought the site was easy to use Hufflepuff Team
30:27.2 Be nice to have a members tab. Hufflepuff Team
30:32.2 The site is pretty much predictable and descriptive. Hufflepuff Team