Memorandum

To: Dr. Carol Barnum  
From: The iUser Group – Carol Njama, Lydia Peavey, Allison Smith, John Weaver  
Date: September 18, 2011  
Subject: Description of Sources of Information for Personas

The iUser Group (iUG) team at Southern Polytechnic State University (SPSU) developed two personas for our Engineering for Change (E4C) usability testing project. This memorandum outlines our research methods, provides an overview of both personas, and describes the sources of information used to create these personas.

**Purpose and Methodology**

The group developed two personas representing specific user profiles for use in the E4C heuristic evaluation. The personas will also help us identify participants for website usability testing.

Each member conducted individual research, then we compared and discussed the findings. We collaborated through Vista chat and email to develop the two personas.

Based on the research, the iUG team agreed on two personas:

1. An international engineering student. Although this persona is specifically of Indian descent, he is representative of an international student population
2. An undergraduate engineering student from the United States.

**Persona One – International Student**

**Overview**

Based on the research done by the iUG team on the E4C website, the first of two personas is an international graduate engineering student.

The idea originated during discussions with the E4C contact, Kasmore Rhedrick (personal correspondence, August 30, 2011), which included questions regarding the registered member profiles of the E4C website. According to the E4C-Filtered Dashboard document that our Engineering for Change client Kasmore provided via email, the second largest group of registered users is from India. Other countries with large amounts of registered users include Pakistan, Canada, and United Kingdom respectively.

With this idea, the iUG team created a persona of a graduate engineering student of Indian descent as a representation of one of the international countries. The SPSU international student is currently a member of the IEEE and plans on going to India to work with the goal of helping his community through engineering projects. According to Kasmore, this is a typical example of the E4C website’s goal – as a way to help engineering professionals and students channel their work to help communities around them.
This situation of the persona of an Indian international student is a result of the recent economic situation in the United States. Many Indian professionals are going back to their home country because of outsourcing of software and engineering jobs to India and Pakistan. In addition, the stringent federal laws regarding work Visas in the United States prevent employers from renewing the H1 and H2 Visas and sponsoring International students who are vital in the software and engineering fields.

**Interviews/Encounters with College Friends**
One of the iUG team members knows close college friends and colleagues who have gone back to India due to the issues mentioned above. These issues not only affect students and professionals of Indian descent, but are a representation of some of the issues that international students are facing here in the United States.

On the bright side, the international students that are returning home are using the knowledge and skills acquired while in the United States to make projects like those found on E4C’s website a success.

India has encountered global humanitarian concerns, especially in Indian slums. According to the YouTube video, “Slums in India,” sheer poverty, and lack of sanitation and hygiene are a shock to foreigners. The success of the blockbuster movie Slumdog Millionaire depicts some of the global issues that India is currently facing. These issues warrant projects and collaboration methods such as those proposed by E4C due to the vast poverty, hygiene, and sanitation issues that come as a shock to most foreigners who visit India and other third world countries.

**E4C Profiles**
Additional research included browsing the E4C’s member profiles and involvement in the E4C’s Bulletin Board and Workspaces. Many of the international members who post on the Bulletin Board are undergraduate students. The majority are from India, with Pakistan and Indonesia also well represented.

These students both initiate and respond to requests seeking knowledge or recruiting on the Bulletin Board. While they do not always specify which schools they attend on their profiles, many list the degree they are pursuing and why they are pursuing it. This information helped give shape to the persona’s goals and motivations. For example, a student from Indonesia is interested in helping the environment and an Indian student specifically indicates that he is interested in helping his country and creating awareness of issues in India.

All of the profiles studied indicate that the students are a part of IEEE or ASME. All of the students participate on the Bulletin Board, but only half participate in the Workspace. This information will help determine scenarios for the heuristic evaluation and for the usability testing of the E4C website. Out of the students who include a picture on their profile, only one is female and the other four are male. This helped determine that the persona should be male.

**YouTube Videos**
Other research used by the iUG team to help create the persona was YouTube videos. The videos show international students who were educated in the United States and either remain in the U.S. or go back to their hometown. According to the student members of IEEE, many students tend to continue their relationship with the community. These students are passionate about helping communities around them and continue these relationships with the communities.

One such case is an IEEE project – Engineers for Education YouTube video. It depicts an engineering professional who started an education initiative project in Orange County, California and internationally.

**Persona Two – Undergraduate Engineering Student**
The other persona we created is representative of a typical undergraduate engineering student that might be an active member of the E4C community. He is a young civil engineering student attending a liberal arts school. His hobbies and technological aptitude parallel actual users of the E4C website.
One of the primary reasons we selected this persona is because of the likely availability of similar students in the SPSU community. We detail our methodology and sources in the following section.

**E4C Social Media Outlets**

We used Twitter profiles of people that follow the E4C’s twitter feed as one of the foundations to help create this persona. E4C currently has a little over 2,600 followers. A sample of 30 that included the word student in their profile or appeared to be around the age of a college student was selected. These were split between students from U.S. colleges and students from international schools. From these profiles we were able to derive that:

- Most listed traveling as a passion.
- Most of the domestic students lived in the New England area or along the west coast.
- Most were interested specifically in civil engineering.
- Most were nearing the end of their undergraduate studies.
- Many spoke Spanish as a native language.

Several interests including photography, music, and activities related to nature were common. Many of the E4C twitter followers indicated that they would like to use engineering as a means to change the world.

A review of E4C’s Facebook page did not yield much information since access was limited to E4C specific content. Additionally Linked In contained mostly the profiles of professional engineers. For the purposes of our goals and objectives, Twitter and YouTube were the most useful social media outlets.

**E4C Profiles**

We scanned many of the workspaces and profiles on E4C to seek information on locations of interest to students. While the largest concentration of workspaces are in India, 7 of the 50 most populous are focused in Latin America. The interest in this area is likely a combination of both need for sustainable engineering projects and proximity to the United States.

Latin and Central America are the focus of many religion-based mission trips as well as the types of projects that make E4C’s collaborative environment successful.

**Research of Liberal Arts Engineering Programs**

Based on the data from Twitter profiles and E4C’s focus on humanitarian engineering, we decided to do more research on civil engineering and college engineering programs that have a human-centered focus. This lead to a USA Today article that spoke of how more liberal arts schools are offering engineering degrees.

Although many of these schools are marketing the programs as an alternative to big name schools, the programs are still largely comprised of males. Among the schools mentioned in the article were Bucknell and Swarthmore. A review of Swarthmore’s engineering program website revealed that much of the coursework is focused on civil engineering. Additionally, it is active with professional associations such as IEEE and ASME as well as Tau Beta Pi, the engineering honor society.

**Additional Sources of Information**

We also looked at websites of a few of the larger engineering programs to get an idea of the types of activities that students are involved in and as a potential source of a photo. The activities were similar to findings from the sources mentioned in other sections.

The photo we used was the result of a Google Images search of “college student” and comes from a stock photo website.
**Conclusion**

Both of the personas created represent actual users of the E4C website. They share common goals, characteristics, and motivations and are based on actual research of the website’s users. Research from additional sources supplemented and confirmed these findings. The iUG team is confident that we can recruit similar users for usability testing from the SPSU community.

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