Usability Evaluation of Different E-Shopping Websites

Group Number 3

Anand Dhandhania – B10053
Bharat Kumar – B10056
Ram Garg – B10070
Sanchit Khattry – B10029
Tushar Dublish - B10037
Introduction

What are we doing?
We are analyzing the usability of different E-Shopping websites for persons with different disabilities. We have collected data from multiple websites and have compared the data to rate a particular website on ease of use and clarity of information.

Why is it important?
By making use of this particular project both, the user as well as the owner of the website, can benefit. The user can be given recommendations, based on the data collected, to prefer a particular website over the other. Whereas the owners could be guided towards certain changes to help them to expand the domain of their customers.

Our Findings:
We made use of the Cambridge Simulator and using it we collected the data for the different websites. Some were better for a user having Parkinson disease, whereas it lacked when it came to a person suffering from Myopia. So all in all there was no one website which could cater to all the needs. The entire data that we collected would be demonstrated in the presentation. We have conducted graphical analysis on the collected data.

Team Structure and Individual Responsibilities:
The team comprised of five persons:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tushar Dublish</td>
<td>Data Collection and Data Analysis</td>
</tr>
<tr>
<td>Sanchit Khattry</td>
<td>Documentation and Data Analysis</td>
</tr>
<tr>
<td>Ram Garg</td>
<td>Data Analysis</td>
</tr>
<tr>
<td>Bharat Kumar</td>
<td>Project Management</td>
</tr>
<tr>
<td>Anand Dhandhania</td>
<td>Field Researcher</td>
</tr>
</tbody>
</table>

Detail of Work

Our Approach:
We have made use of different E-Shopping websites. We have defined a product which the user is willing to buy on the website. The user here is also assumed to be suffering from one of the following diseases:
Parkinson, Polio, Color Blindness or Myopia.
Then we traverse through the various cases that arise.
Like for example, a person suffering from Parkinson disease has been taken as a test case to the Cambridge simulator. Screen shots were taken of each and every page the user traverses through in order to reach his/her destination, which is the final buying page. The screen shots are then used as inputs to the Cambridge Simulator, which simulates the case and gives us the various data. Similar procedure is used for all the other diseases over the same websites. The data thus collected was used to make different graphs, which would be presented in the power point presentation.

Our objective was to figure out that if the user is impaired, which E-Commerce website would be best to use. We performed our study using the Cambridge Simulator for both visually impaired and motor impaired user.
We run the simulation for color blind user, then for different scales of visually activity.
Similarly for motor impaired users we chose a particular product and trace down the following steps to buy it from different websites.

We fed in the screen shots of different steps in buying a product from a website and then ran over a simulation for each screen shot to figure out the time taken by the user to click to move ahead. This gave us the total time taken for a user to shop a product from a website.

On the basis of these results, we analyzed the results using histogram analysis and line graph study. This study led us to the following findings.

**Key Findings:**

We analyzed each website for a particular disease and the on the basis of our line graph study for each disease we found:

- If a person is suffering from Polio, both Flipkart and Shopclue is equivalently good but Croma is not advisable to use, since it takes much more time.
- Again, if a person is suffering from Parkinson, Flipkart's performance has degraded a bit, Shop Clue performs best and Croma continues to take a lot of time.

After that when we analyze a particular website it is observed that there is change in performance of websites for a particular disease:

- There is a little bit increase in time taken for Parkinson user for both Flipkart and Shopclue.
- But, for Croma the time taken for Parkinson user increases in substantial amount.

For visually impaired users, suffering from Myopia or Color Blindness the same study was conducted using Cambridge simulator.

**Conclusion:**

We started out with an aim to advise an impaired user which e-commerce website to use if he/she wants to buy a product.

We performed the study over three websites FlipKart, ShopClue and Croma. We figured out that all the three websites ensure that the website could be used pretty easily for color blind user. FlipKart performs best for visually impaired user and Croma is not advisable to use. If the user is motor impaired then we would advise the user to use Shop Clue, because it takes least time for the user to buy a product. Here again Croma performs best as the user takes a lot of time to buy a product on Croma.

This study enabled us to understand the usability issues of a website and based on our study we could advise the designers of the website to make some modifications in their advise to improve the performance of their website.