

Appendix 3:

User Testing Document

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1. User testing plan

In brief, the functional requirements for Ipswich's Weather Lamb are as follows:

- The user can view the current weather information.
- The user could check the past weather records.
- The user may obtain some statistical information from the web site (e.g. maximum temperature in last month).
- Information is shown in the form of a diary in reverse chronological order
- Some introductions to Ipswich's climate are required.

The functional requirements for IWL were tested by during alpha testing phase. In this user test, the main purpose is to find out whether the website has achieved is non-functional requirements, which are:

- Information of how well the international students are coping with the weather is shown in a fun and engaging manner
- The user can easily understand the weather information presented in the website
- The user could understand how to browse the web site without any extra explanations.

1.1. Methods

The primary method used in the test is to time the users as they navigate through the website. This is achieved by giving users tasks to accomplish and recording the time taken to complete the tasks. This method was used to test the requirements:

- The user could understand how to browse the web site without any extra explanations.
- The user can easily understand the weather information presented in the website

To test these requirements, scenarios were developed based on the pages available on the website and also the search functions. Scenarios and tasks to be accomplished can be viewed in the test sheet available in Appendix A.

Users are also asked to give several information presented by the website and were observed whether they can give the right answer.

The first impression of users about the lamb is observed to test this requirement:

- Information of how well the international students are coping with the weather is shown in a fun and engaging manner

Users are observed whether they smile or laugh when they first see the lamb. This method is used because first impression laugh or smile is an unconscious act thus can be use to verify whether the users think the website is fun or otherwise.

2. User testing process

User testing starts when a user is seated in front of a computer with the web browser open. The user is then given a piece of paper with IWL URL written on it. The user is asked to go to the website.

Tester sits next to the user and asked questions according to the test sheet (Appendix A). The user is observed and time is taken.

At the end of the test, the user is interviewed in an open-ended manner.

The test was done on eight users; two of them had already seen the lamb prior to testing.

3. Test result analysis

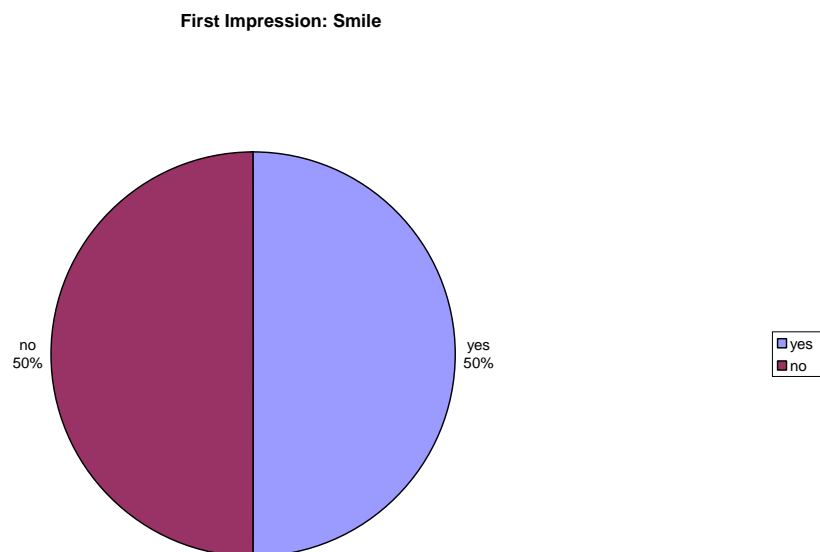


Figure 1: Users' First Impression of the Lamb

Figure 1 shows the users' first impression of the lamb. 50% of the users (3 users) smile and 50% (3 users) didn't. 2 users are excluded from this part of the test because they had previously seen the lamb.

2 of the users smiled and laughed because they get the idea the lamb's length depends of the minimum and maximum temperature. A user who smiled didn't get the idea behind the lamb but smiled while exclaiming that the lamb is cute.

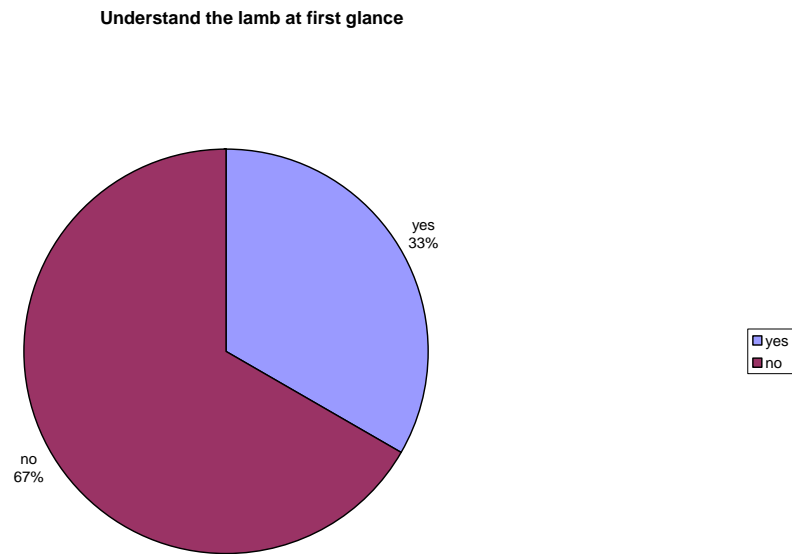


Figure 2: The ability of users to understand the lamb at first glance

Figure 2 shows the ability of users to understand the lamb at first glance. 67% of the users couldn't understand the lamb at first glance (4 users). 33% understood the lamb at first glance.

It is interesting to note that it took some time for the users to realize that they can get a textual description of the lamb on the left column of the homepage. One user had to be told that the information is available

The time the users took to understand the weather information on the homepage

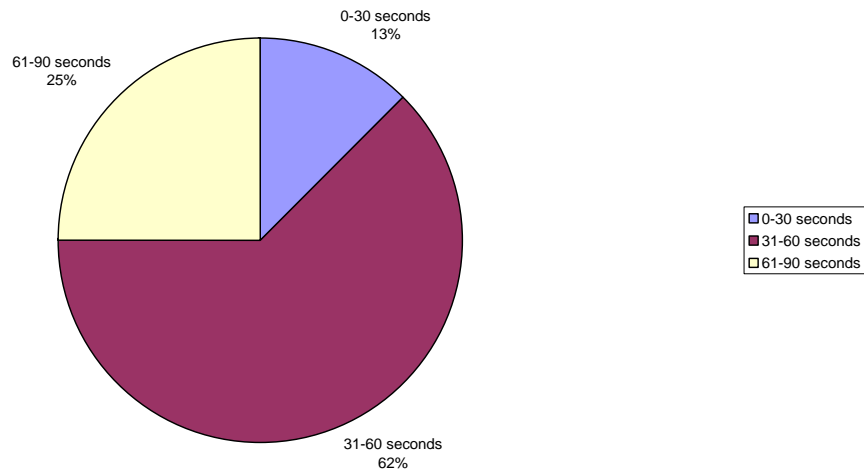


Figure 3: The time the users took to identify the weather information on the homepage

Figure 3 shows the time the users took to identify the weather information presented on the homepage. Users were asked to find the current temperature, minimum and maximum temperature, wind speed and humidity. The time recorded includes the time taken to ask the questions. 62% (5 users) took between 31-60 seconds, 25% (2 users) took between 61-90 seconds and only 1 user (13%) took from 0-30 seconds.

Since the time to ask the questions were also recorded, it is observed that it is very easy for the users to quickly recognize the weather information presented by the lamb image on the homepage.

Go to the lamb diary from the homepage

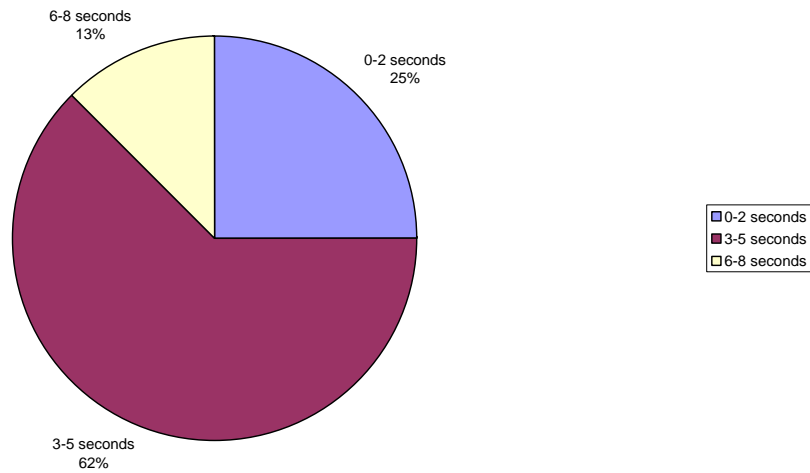


Figure 4: User navigation time from the homepage to lamb diary

Figure 4 shows the time the users took to navigate from the homepage to the lamb diary. 62% (5 users) took between 3-5 seconds. 25% (2 users) took between 0-2 seconds. 13% (1 user) took between 6-8 seconds.

It can be said that it is easy to navigate from the homepage to the lamb diary page.

Search past data using the calendar

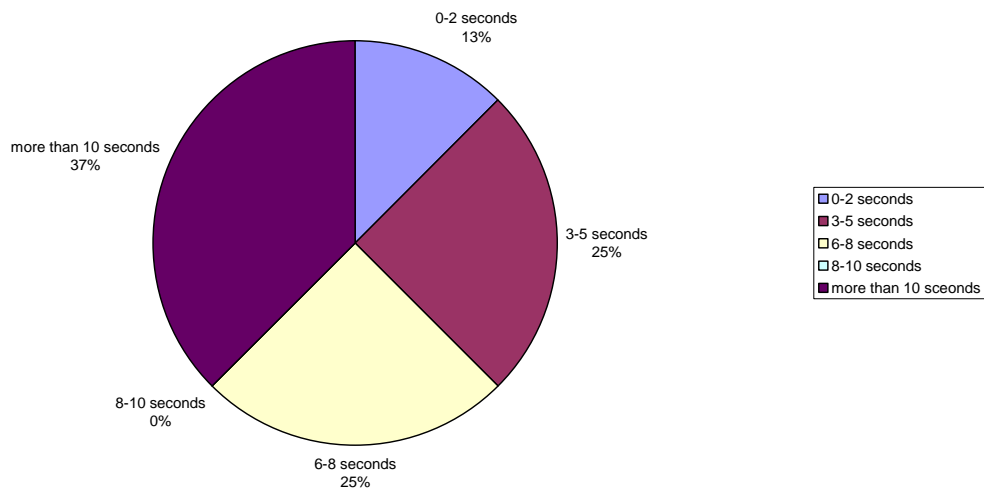


Figure 5: Usage of calendar in lamb diary to retrieve past data

Figure 5 shows the time it takes for the users to realize that the calendar can be used to access past data. 37% (3 users) took more than 10 seconds. 25% (2 users) took

between 6-8 seconds. 25% (2 users) took between 3-5 seconds. 13% (1 user) only took between 0-2 seconds.

There seems to be a consistency in the result of this task. After all the users were tested, it was realized that two different past data dates are given to the users. Though the result is not accurate, it seems fairly easy for the user to understand that the calendar can be used to search for past data. This is because over 50% managed to do that in 8 seconds or less.

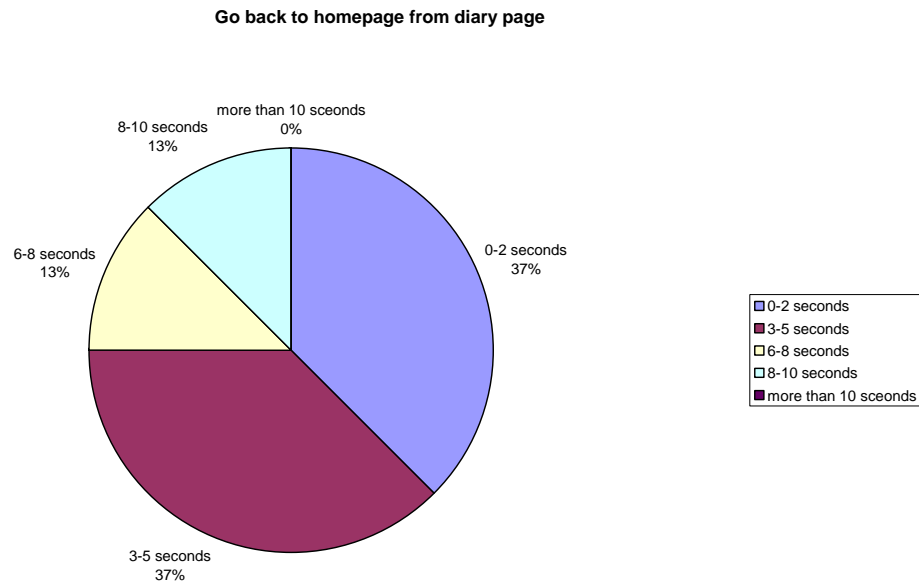


Figure 6: User navigation time from diary page to homepage

Figure 6 shows the user navigation time from diary page to homepage. 37% (3 users) took between 3-5 seconds. 37% (3 users) took 0-2 seconds. 13% (1 user) took 8-10 seconds. 13% (1 user) took 6-8 seconds.

Thus it can be said that it is very easy for the user to navigate to the homepage since 74% of the users managed to accomplish the task in less than 5 seconds.

Seasonal search: spring 2005

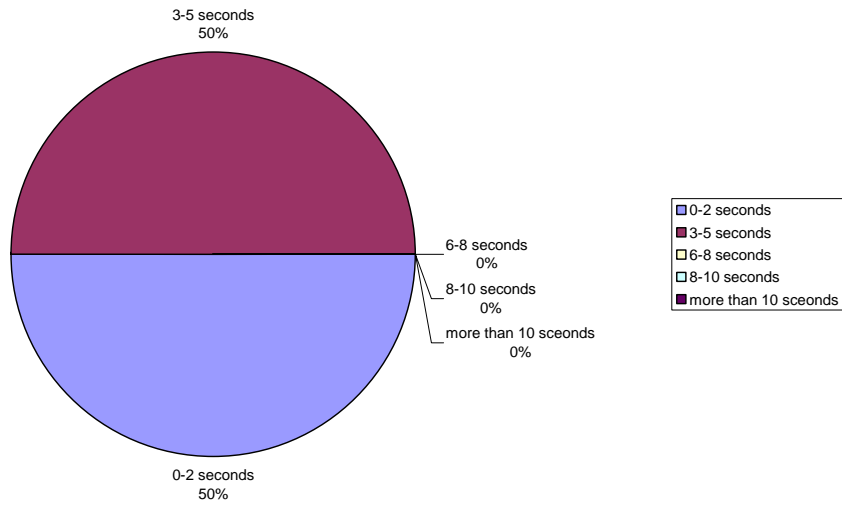


Figure 7: Using the seasonal search function

Figure 7 shows the time users took to know realize the purpose of the seasonal search functions. 50% (4 users) took between 3-5 seconds. 50% (4 users) took 0-2 seconds.

Thus, it is confirmed that the design of the seasonal search function is intuitive and very easy to use since 100% of the users accomplish the task in 5 seconds or less.

Give weather info from 10/8 - 20/8 (currently at seasonal search result page)

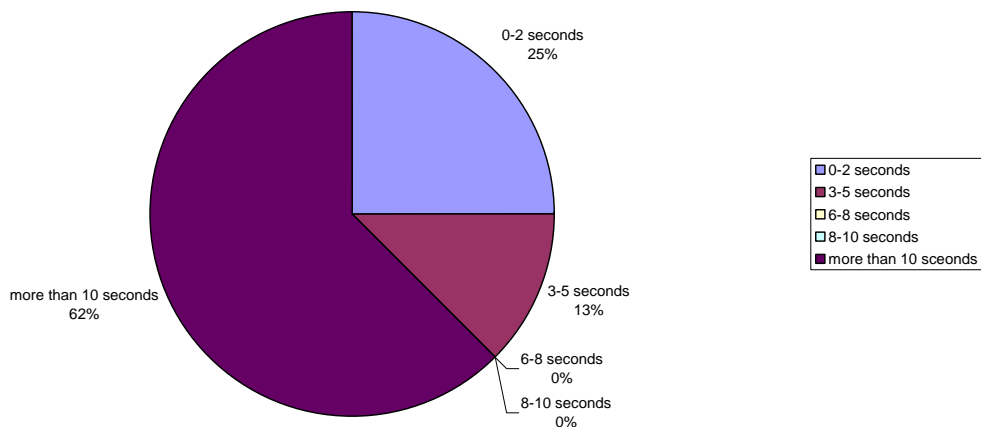


Figure 8: Using the statistical search functions

Figure 8 shows the time the users took to realize that the search functions can be used to give weather information for certain date range. 62% (5 users) took more than 10 seconds. 25% took between 0-2 seconds and 13% (1 user) took between 3-5 seconds.

It must be noted that the users were asked to give the weather information for a certain date range while they were at the seasonal search result page. Since the page doesn't have the search form, the users relied on their memory to go back to homepage and use the statistical search function.

4. Discussion, Changes Made and Recommendations

Overall, it can be said the website is easy to understand and navigate. However, a closer look at the results has unveiled certain flaw to the design. From the analysis, non-functional requirements were compared against the analysis result to determine whether the website has fulfilled all the requirements.

Requirement 1:

- Information of how well the international students are coping with the weather is shown in a fun and engaging manner

From the analysis, 50% of the users smiled or laugh when they see the lamb. Thus it can be said that this requirement is fulfilled. Although more than 50% of the user couldn't make out what the lamb is all about at first glance, they understood after being instructed to read the explanation on the left column of the website. In this case, the fun-factor can compensate usability. After all, the concept of the website is all about fun and engagement. A more readable form of weather information presentation such as tables or graphs would make it easier for the users to understand the information at first glance, but the fun factor would be lost.

The fun factor in this website has also been observed to incite curiosity in the users. Once they understood that the length of the lamb changes according to temperature fluctuation, they used the calendar in the lamb diary to browse through past dates to see how long the lamb is being pulled.

Requirement 2:

- The user can easily understand the weather information presented in the website

Even though most of the users took some time to understand the lamb, more than 50% can quickly recognized all weather information being displayed. Thus it can be said that weather information can be easily understood.

It was observed that the users could easily understand the graph produced by the search result, but got a bit confused about the text written on the left column of the search result page. Most users thought that the dates of maximum and minimum are the date range that they entered in the search form.

Thus, adjustment was made to add the search term on the search result page as shown by the red circle in Figure 9.

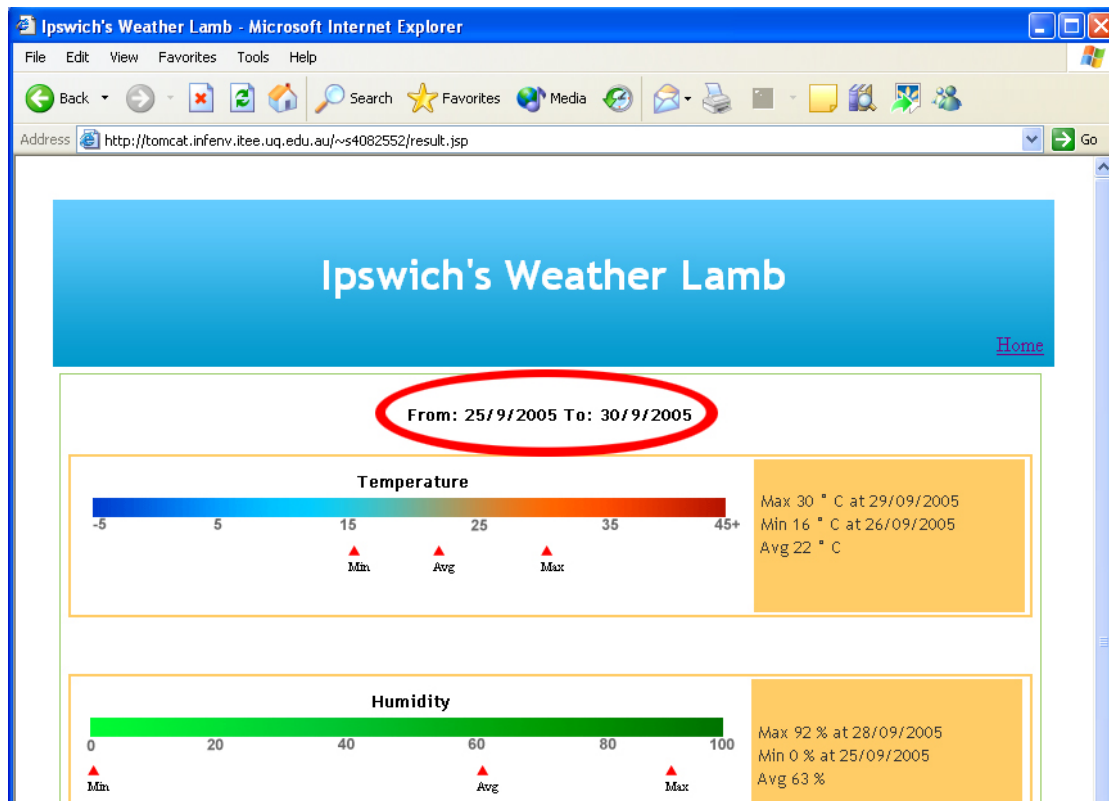


Figure 9: Red circle indicating adjustment made to search result page

Requirement 3:

- The user could understand how to browse the web site without any extra explanations.

Overall navigation of the website is very easy to understand except when the users were asked to give the weather information of a certain date range when they were currently at the search result page. 62% of the users took more than 10 seconds.

This is because the users had to rely on their memory that the search function is available on the homepage thus they had to go back to the homepage. It is suggested that the search result page should also contains the same search forms available on the homepage. However, the adjustment has not been made. Therefore it is highly recommended that the next version of IWL should be fine-tuned to address this issue.

5. Conclusion

Overall navigation of the website is easy. Information presented in the website is easy to understand. The inability of the user to understand the lamb at first glance can be compensated with the fun-factor the lamb provides. Besides the initial target users for the lamb diary are blog readers (see LWS SRS) who are keen to read and will read the lamb description. The next version of the website should include the search form in the search result page.