

Appendix A: Questionnaires

Below is a set of questions that were used to compile the questionnaires for testing the usability of the four selected services.

1. What is your current occupation?

Undergraduate student
Postgraduate student
Researcher
Faculty member
Other

2. How often do you use the Internet?

Several times a day
Once a day
Several times a week
Once a week
Less than above

3. What services do you commonly use?

<Service-dependent list>

4. How often do you use this application?

Several times a week
Once a week
Several times a month
Once a month
Less than above

5. Overall, I am satisfied with this application

1 Strongly disagree
2
3
4
5 Strongly agree
N/A

6. It was simple to use this application

1 Strongly disagree
2
3
4
5 Strongly agree
N/A

7. I find the information retrieved by this application is very useful

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

8. I can effectively complete my work using this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

9. I am able to complete my work quickly using this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

10. I feel comfortable using this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

11. It was easy to learn to use this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

12. It was easy to remember how to use this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

13. I believe I became productive quickly using this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

14. Whenever I make a mistake using the application, I recover easily and quickly

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

15. The support information (such as online help, on-screen messages, and other documentation) provided with this application is clear

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

16. It is easy to find the information I require

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

17. The terminology used is clear

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

18. The instructions are easy to understand

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

19. The instructions are effective in helping me complete tasks

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

20. The organisation of text/menu options on the screens is clear

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

21. The layout of retrieved data is clear

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

22. The application clearly notifies me of what stage in the process I am at

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

23. The interface of this application is pleasant

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

24. I like using the interface of this application

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

25. The application's navigational options are consistent

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

26. The application provides the versatility I require

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

27. This application has all the functions and capabilities I expect it to have

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

28. The main menu is effective in guiding me to specific areas

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

29. I found the search function helpful in finding the information I was looking for

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

30. There were clear directions to guide me through the content to get the information I was looking for

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

31. Search results display too much information

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

32. The search function is easy to use

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

33. I find it easy to return to the previous page within the site

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

34. I find it easy to return to the application's homepage

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

35. I have to keep a mental note of where I am within the site

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

36. The main menu clearly identifies the services available

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

37. I feel lost when using the site

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

38. The information displayed matched my expectations

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- N/A

39. Adequate help is provided to assist me in performing a search.

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- n/a

40. I will visit the site again.

- 1 Strongly disagree
- 2
- 3
- 4
- 5 Strongly agree
- n/a

41. List the most NEGATIVE aspects of the application:

42. List the most POSITIVE aspects of the application:

43. Are there any difficulties that you encountered when using the application?

44. How could the application be improved?

45. If you wish to be entered into the FREE DRAW, please provide your email address

Appendix B: Focus Group Questions Guidelines

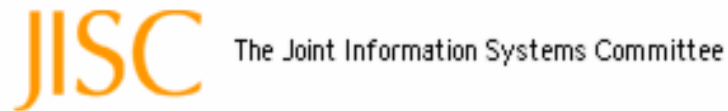
A – Concurrent focus group

1. Who is the service aimed at:
2. How does Service X compare to other similar services regarding:
 - usability
 - look and feel
 - navigation
 - versatility
3. Is the speed at which the service retrieves and delivers information adequate
4. Does the service inform users as to where they are on the site
5. Does the service inform users as to what is happening
6. Is the information well organised
7. Is the terminology used acceptable
8. Is their consistency in operation and design
9. Does the system enable tasks to be accomplished effectively and efficiently
10. Key positive issues
11. Key negative issues
12. Is the information architecture logical

B – Retrospective focus group

1. All titles and heading are clear
2. The appearance of the site is aesthetically pleasing
3. Text is easy to read
4. The site has clear and consistent navigational options
5. The Help facility is very useful
6. The objective of the site is clear
7. The site delivers a high quality service
8. Organisation of content is logical
9. Remembering how to complete a task is easy
10. It was easy to learn how to use this site

Appendix C: User Testing Coding Form



PARTICIPANT NUMBER:

NAME:

SERVICE:

OBSERVATION SHEET

VERSION: 0.1

Phase 1: Demographics

2 minutes

Name:

Gender: Male Female

What is your current position?

Undergraduate student

Postgraduate student

Researcher

Faculty member

Other

What is your area of interest for studies / research?

How often do you use the Internet?

Several times a day

Once a day

Several times a week

Once a week

Less than above

How familiar are you with this service?

1 Not at all familiar

2

3

4

5 Very Familiar

Phase 2: Free Exploration 5 minutes

Can you spend a few minutes exploring the application. It would be good if you could note below and on the following sheet any positive aspects about the system, as well as any negative issues.

On completion of the task please complete the corresponding questions on the next page

Comments.

Questions

Could you rate the following questions on a scale of 1 to 7. You can choose one, or, seven, or any number in between

Exploration Task		
1	How confident are you that you have understood what this service provides?	Not confident Very confident 1 2 3 4 5 6 7
1	Did you feel disorientated (knowing where you are) whilst performing this task ?	Very disorientated Not disorientated 1 2 3 4 5 6 7
2	Was doing this task satisfying?	Very unsatisfying Very satisfying 1 2 3 4 5 6 7
3	Rate your ease of navigation whilst performing this task?	Very easy Not easy 1 2 3 4 5 6 7

[end of this task]

Phase 3: Tasks

Task 1: <A number of tasks are developed specific to the application being tested. These ask the user to carry out a specific activity and then report on this>

As before, when performing the tasks could you note below, and on the following sheet any positive aspects about the system, as well as any negative issues.

On completion of each task please complete the corresponding questions (see next page)

Comments.

Questions

Could you rate the following questions on a scale of 1 to 7. You can choose one, or, seven, or any number in between

Task 1		
1	How confident are you that you managed to save your record via email?	Not confident Very confident 1 2 3 4 5 6 7
1	Did you feel disorientated (knowing where you are) whilst performing this task ?	Very disorientated Not disorientated 1 2 3 4 5 6 7
2	Was doing this task satisfying?	Very unsatisfying Very satisfying 1 2 3 4 5 6 7
3	Rate your ease of navigation whilst performing this task?	Very easy Not easy 1 2 3 4 5 6 7

[end of this task]

Phase 4 : Impressions

As before, could you rate the following questions on a scale of 1 to 7. You can choose one, or, seven, or any number in between.

The questions in this section relate to the site as a whole.

1	All titles and headings are clear	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
1	The appearance of the site is aesthetically pleasing	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
2	Text is easy to read	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
1	The site has clear and consistent navigational options.	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
1	The Help facility is very useful	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
2	The objective of the site is clear	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
3	The site delivers a high quality service	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
1	Organisation of content is logical	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
1	Remembering how to complete a task is easy	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	
2	It was easy to learn how to use this site	Strongly disagree	Strongly agree
		1 2 3 4 5 6 7	

Appendix D: Checklist for Heuristics Evaluations

Overall – General Usability evaluation for each site

Navigation and Information architecture

The site should have a navigation that makes it easy to understand how to navigate to the different areas of the site. The organization of the information should be intuitive and easy to find.

- Is it clear where in the structure you are on the site?
- Are the different sections of the site clear and can you understand what content or features to expect?
- Does each page have a clear heading to locate where you are?
- How deep is the link structure? Do all pages provide relevant content?
- Does the browser's Back allow the users to see the last screen?

Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing or not. The site should follow the usability standards.

- Are the different information categories consistently organized?
- Is the organization of the content consistent?
- Is the navigation easy to use and consistent?

User control

The site should always keep users informed about where he/she is in the information architecture and through appropriate feedback within reasonable time. Users often choose site functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state.

- Can the user end in the middle of a workflow (exit)?
- Can you change your mind in the middle of a workflow?

Readability and Ease of learning

The user should not have to remember information from one part of the dialogue to another. Instructions for use of the site should be visible or easily retrievable whenever appropriate.

- Are the pages uncluttered and easily scanned?
- Are there areas or sections that are more difficult to learn than others?
- How demanding is it to learn how to use the site?
- Is there relevant supportive content where needed?

Aesthetic, graphic design and branding

Dialogues should not contain information, which are irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

- Is the graphical design functional? Does all the design elements support a task?
- Does the graphic design seem to support the brand of the company?
- Is there a coherence of online branding with offline perception/branding?
- Is the usage of icons or other visuals easy to understand and does it support the task?
- Is the visual design appealing?
- Is it the design consistent in the way actions are treated?
- Is consistent branding applied all across the site?

Language

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

- Is the usage of labeling consistent?
- Does the text/editorials seem to be using the language that is familiar to the target audience?
- Is the content timely and credible?

Help and documentation

Even though it is better if the site 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 lengthy.

- Are Help texts and instructions used efficiently on the site?
- How does the search feature work?
- Is the search result page presented clearly?
- Are the search results consistent with search parameters?
- Is there a relevant rating system of the results?
- Is there a site map and does it make it easy for the user to understand where he/she is?

Error prevention and presentation

Even better than good error messages is a careful design that prevents a problem from occurring in the first place. Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

- How is the user informed about what error he has made and how to correct it?

Technology

Technology is not something the user should have to deal with or understand. The site needs to perform according to expectations and be stable.

- Is the download time fast overall on the site?
- Are there dead links? Broken scripts or functionless forms?

Appendix E: Personas for cognitive walkthrough evaluation

Persona 1



Helen Bennett. BA student in History at Cambridge University

Helen is 22 and a third year undergraduate student. She still lives with her parents and has followed the standard educational path. Helen uses the Internet around three times a week for email and browsing. She is a relatively inexperienced computer user who only uses Microsoft Office programmes, and has no experience of using GIS software. Her only interaction with digital maps has come via using MSM maps to find her way round Cambridge, which she finds quite simple to use.

For her dissertation entitled “*The changing nature of the hopping industry in Kent*” Helen wishes to retrieve a map of Staplehurst, Kent and surrounding farmland. She wishes to include this map later in her Word document to support her research. Helen therefore requires quite a large scaled map of the area that displays farmland around the small town.

Persona 2



Suzanne Porter. BA student at the Royal College of Art

21 year old Suzanne is in the second year of her course and is interested in *cubism*. She is a frequent user of the Internet; graphical software packages, and counts herself an expert on PhotoShop. She has very little patience when using new applications however, and refuses to read long textual instructions. She expects a programme to deliver what she wants immediately or she will go elsewhere.

Suzanne has been asked to find out how the university can deposit her classes project on the site.

Personas 3



Monica Honkins

Lecturer in Business Computing, Surrey University

Monica just recently completed her thesis and obtained a PhD in computer science. Her research interest is in Business process re-engineering and system engineering process. She is 28 years old and is now working at Surrey University as a lecturer. She is now teaching 1st year undergraduate introduction to business computing module and would like to find out more about how to teach students effectively.

She is an expert in computing and familiar with most programming and software applications. She also uses the Internet regularly in her research.

Monica's goal:

- Research on literatures in the area of business computing
- Research on relevant course materials that would assist in her teachings.
- Find out information on how to teach students effectively.

Persona 4



Karina Goodhead

Recent Graduate, University of Surrey, UK

Karina is a 26 years old recent graduate, she is a visually impaired person and just completed her postgraduate degree in IT at University of Surrey. She likes judo and often participates in national competitions for the disabled. Her main interest is in computing and she uses the Internet a lot to browse for information and do shopping on the Internet. She uses both Braille display and screen reader but she likes using the screen reader when browsing the Internet and she's an expert user in using the assistive technology – JAWs for Windows screen reader.

Karina's goals:

- Research on journals and relevant articles in the area of computing.
- Keep up-to-date with the latest development in computing and sports (Judo)
- Shopping through the Internet.

Appendix F: Template for Cognitive Walkthrough

Action sequence	Will the user be trying to achieve the right effect?	Will the user know that the correct action is available?	Will the user perceive that the correct action will achieve the desired effect?	Appropriate feedback provided?

