

## Additional Experimental Materials: Forms

Study published as:

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Recruitment notice (on email mailing list):

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/ 3 / FROM: THE FACULTY OF COMPUTER SCIENCE  
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We are running a research study examining how people visually scan web pages when browsing. The time commitment would be a one-hour session, to take place in the Computer Science Building the week of December 6.

Participants will be paid \$10 for this session.

To be eligible to participate, you must be familiar with Internet Explorer (web browser), and have performed all of the following tasks on the web in the last 6 months: reading text, online banking, shopping, and using a search engine (such as Google). We encourage people from a variety of academic and work backgrounds to take part in this study.

You must complete a pre-screening questionnaire (sent to you by email) to determine whether your computer background is appropriate for our study. If you are interested in participating, please contact Tara Whalen (username@xxx.dal.ca)



## Informed Consent Form

### Web browser visual cues: an eye-tracking study

#### Principal Investigator and Contact Person:

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We invite you to take part in a research study being conducted by Tara Whalen, who is a graduate student at Dalhousie University, as part of her doctoral program. You are eligible to take part in this study if you work or study at Dalhousie. The study is described below. This description tells you about the risks, inconvenience, or discomfort which you might experience.

You will be asked to participate in a one hour session using a browser to perform web-based tasks on a workstation that is connected to an eye-tracker. Your participation in this study is voluntary and you may withdraw from the study at any time. You should discuss any questions you have about this study with the principal investigator (Tara Whalen) who will be administering the study. Participating in the study will not benefit you directly, but we might learn how to better design visual aspects of web browsers. There is a low risk that you may experience some frustration in completing the activities. You will receive \$10 for the one-hour session, even if you withdraw from the study before the session is completed.

At the beginning of the session, you will be asked to fill out a background questionnaire detailing your previous experience using the web and web browsers. You will then be asked to complete a short series of computer tasks with a web browser. The location and duration of your eye movements on the screen will be recorded using an eye-tracker. After you have completed the set of tasks, you will be given a questionnaire that will ask about your experience with the tasks you just completed. You will then complete a second set of browser tasks that are more specifically focused. Your eye movements are again recorded with the eye tracker, and once the tasks are completed, you will be given a questionnaire that asks about your experience during the second set of tasks.

Interactions during the session will be recorded using field notes, computer logging, and eye-tracking. All personal and identifying data will be kept confidential. Anonymity will be preserved by using pseudonyms in any presentation of textual data in journals or at conferences. The informed consent form and all research data will be kept in a secure location under confidentiality in accordance to University policy for 5 years post publication.

In the event that you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact {Director Name}, Director of Dalhousie University's Office of Human Research Ethics Administration for assistance: (xxx) xxx-xxxx, username3@xxx.dal.ca

*"I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in the study. However, I understand that my participation is voluntary and that I am free to withdraw from the study at any time."*

#### Participant

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

#### Researcher

Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

## Pre-screening Questionnaire

1. How long have you been using the World Wide Web? (choose one)

- ☐ I have never used the World Wide Web
- ☐ less than six months
- ☐ six months to one year
- ☐ one to three years
- ☐ three to five years
- ☐ more than five years

2. How often do you use the World Wide Web? (choose one)

- ☐ at least once a day
- ☐ a few times a week
- ☐ weekly
- ☐ monthly
- ☐ less than once a month
- ☐ never

3. a. Which of the following Web browsers do you use frequently? (choose as many as apply)

- ☐ Internet Explorer (IE)
- ☐ Netscape
- ☐ Mozilla or Mozilla Firefox
- ☐ Opera
- ☐ Safari
- ☐ other (please specify): \_\_\_\_\_
- ☐ none

3 b. How often do you use Internet Explorer as your browser?

- ☐ at least once a day
- ☐ a few times a week
- ☐ weekly
- ☐ monthly
- ☐ less than once a month
- ☐ never

4. Which of the following online activities have you done on the Web in the last six months, and how many times? Choose the number that you believe to be the closest estimate.

Activity	Number of times				
Reading news or other online information	<input type="checkbox"/> 0	<input type="checkbox"/> 1-3	<input type="checkbox"/> 3-10	<input type="checkbox"/> 10-50	<input type="checkbox"/> over 50
Online banking	<input type="checkbox"/> 0	<input type="checkbox"/> 1-3	<input type="checkbox"/> 3-10	<input type="checkbox"/> 10-50	<input type="checkbox"/> over 50
Using a search engine (like Google)	<input type="checkbox"/> 0	<input type="checkbox"/> 1-3	<input type="checkbox"/> 3-10	<input type="checkbox"/> 10-50	<input type="checkbox"/> over 50
Buying an item with a credit card	<input type="checkbox"/> 0	<input type="checkbox"/> 1-3	<input type="checkbox"/> 3-10	<input type="checkbox"/> 10-50	<input type="checkbox"/> over 50
Checking email through the Web	<input type="checkbox"/> 0	<input type="checkbox"/> 1-3	<input type="checkbox"/> 3-10	<input type="checkbox"/> 10-50	<input type="checkbox"/> over 50

## Background Questionnaire

Subject # \_\_\_\_\_

Note that some of these questions are repeated from the pre-screening questionnaire that you filled out. This is because we need to keep the study data confidential: your email to us was not anonymous, so we did not store the information. Therefore we must collect your answers again (using a Subject ID).

1. What is your gender?    \_\_\_ Male            \_\_\_ Female
  
2. Describe your post-secondary experience, if any – your degrees completed or in progress (ex.: BA French completed, MSc Physics in progress, college degree in electronics...)
  
  
  
3. If you are working at Dalhousie, what is your job?
  
  
  
4. How long have you been using the World Wide Web? (choose one)  
  
\_\_\_        less than six months  
\_\_\_        six months to one year  
\_\_\_        one to three years  
\_\_\_        three to five years  
\_\_\_        more than five years
  
5. How often do you use the World Wide Web? (choose one)  
  
\_\_\_        at least once a day  
\_\_\_        a few times a week  
\_\_\_        weekly  
\_\_\_        monthly
  
6. Which of the following Web browsers do you use regularly? (choose as many as apply)  
  
\_\_\_        Internet Explorer (IE)  
\_\_\_        Netscape  
\_\_\_        Mozilla or Mozilla Firefox  
\_\_\_        Opera  
\_\_\_        Safari  
\_\_\_        other (please specify): \_\_\_\_\_
  
7. How often do you use Internet Explorer as your browser?  
  
\_\_\_        at least once a day  
\_\_\_        a few times a week  
\_\_\_        weekly  
\_\_\_        monthly  
\_\_\_        less than once a month  
\_\_\_        never

8. Which of the following online activities have you done on the Web in the last six months, and how many times? Choose the number that you believe to be the closest estimate.

Activity	Number of times				
Reading news	0	1-3	3-10	10-50	over 50
Online banking	0	1-3	3-10	10-50	over 50
Using a search engine (like Google)	0	1-3	3-10	10-50	over 50
Buying an item with a credit card	0	1-3	3-10	10-50	over 50
Checking email through the Web	0	1-3	3-10	10-50	over 50

9. Check off which of the following websites that you visit. If you check one, please note how familiar you are with that website. If you don't know the site, you can skip to the next one.

Check below if you know the site	I know this site, and it is:		
	slightly familiar	fairly familiar	extremely familiar
<input type="checkbox"/> yahoo.ca	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Google	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Future Shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> cbc.ca	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> infinetcables.com	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> msn.com	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> hotmail.com	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Chapters.ca	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Amazon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> CNN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> gmail.com (Google mail)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Which of the following banks, if any, do you regularly perform online banking with?

- ☐ Royal Bank  
☐ CIBC  
☐ Bank of Montreal  
☐ Bank of Nova Scotia (Scotiabank)  
☐ President's Choice Financial  
☐ TD Canada Trust  
☐ National Bank of Canada  
☐ ING Direct  
☐ other: \_\_\_\_\_

11. How often do you use the web to check email?

- ☐ at least one a day  
☐ a few times a week  
☐ weekly  
☐ monthly  
☐ less than once a month  
☐ never

## Post-Session Questionnaire – Part One

Subject # \_\_\_\_\_

1. Please indicate whether you checked for security information on the following pages

**Gmail sign-in page:**    ☐ yes                    ☐ no                    ☐ I don't remember  
   ☐ I tried to check for security information but could not find it

If yes, please select the option that comes closest to your experience:

- ☐ I checked for security information: I believe the page was secure
- ☐ I checked for security information: I **do not** believe the page was secure
- ☐ I checked for security information: I found it, but I could not understand it

Other comments:

If no, please select the option that comes closest to your experience:

- ☐ I did not check for security information. because I felt it was a familiar secure page
- ☐ I did not check for security information, because I do not believe any web connections are secure
- ☐ I did not check for security information, because I believe email web sites are secure
- ☐ I did not check for security information, because I believe Google can be trusted to set up a secure email site
- ☐ I did not check for security information, because I do not worry about the security of email passwords

Other reasons you did not check for security information:

Bank **sign-in** page (where you entered the password):

☐ yes      ☐ no      ☐ I don't remember  
☐ I tried to check for security information but could not find it

If **yes**, please select the option that comes closest to your experience:

☐ I checked for security information: I believe the page was secure  
☐ I checked for security information: I **do not** believe the page was secure  
☐ I checked for security information: I found it, but I could not understand it

Other comments:

If **no**, please select the option that comes closest to your experience:

☐ I did not check for security information, because I felt it was a familiar secure page  
☐ I did not check for security information, because I do not believe any web connections are secure  
☐ I did not check for security information, because I believe all bank web sites are secure  
☐ I did not check for security information, because I believe **my own** bank can be trusted to set up a secure banking site  
☐ I did not check for security information, because I do not worry about the security of bank transactions

Other reasons you did not check for security information:

Bank **account information** page (where the balances and other account details were):

☐ yes      ☐ no      ☐ I don't remember  
☐ I tried to check for security information but could not find it

If **yes**, please select the option that comes closest to your experience:

☐ I checked for security information: I believe the page was secure  
☐ I checked for security information: I **do not** believe the page was secure  
☐ I checked for security information: I found it, but I could not understand it

Other comments:

If **no**, please select the option that comes closest to your experience:

☐ I did not check for security information, because I felt it was a familiar secure page  
☐ I did not check for security information, because I thought the account pages were secure after I signed in  
☐ I did not check for security information, because I believe all bank web sites are secure  
☐ I did not check for security information, because I believe **my own** bank can be trusted to set up a secure banking site  
☐ I did not check for security information, because I do not believe any web connections are secure  
☐ I did not check for security information, because I do not worry about the security of bank transactions

Other reasons you did not check for security information:

Shopping **credit card information** page:

☐ yes      ☐ no      ☐ I don't remember  
☐ I tried to check for security information but could not find it

If yes, please select the option that comes closest to your experience:

☐ I checked for security information: I believe the page was secure  
☐ I checked for security information: I **do not** believe the page was secure  
☐ I checked for security information: I found it, but I could not understand it

Other comments:

If no, please select the option that comes closest to your experience:

☐ I did not check for security information, because I felt it was a familiar secure page  
☐ I did not check for security information, because I do not believe any web connections are secure  
☐ I did not check for security information, because I believe all pages that ask for credit cards are secure  
☐ I did not check for security information, because I do not worry about the security of credit card transactions  
☐ I did not check for security information, because I believe that the credit card company will protect me in case of fraud / credit card number theft

Other reasons you did not check for security information:

Do you think you would have treated the information more carefully if it had been your own private data, rather than our research lab's data? That is, would you have behaved any differently with your own passwords, etc?

☐ Yes      ☐ No

If yes, explain:

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2. What sorts of evidence do you use (in general ) when determining whether or not a web page or a web connection is secure?

Check all that apply:

☐ don't use **any** information  
☐ "https" in location bar/URL of web page  
☐ lock or key icon displayed by browser  
☐ certificate information  
☐ type of site (e.g., bank, online retailer)  
☐ type of information being submitted (e.g., passwords)  
☐ statements on page that say the site is secure  
☐ other (please specify):



## Post-Session Questionnaire – Part Two

Subject # \_\_\_\_\_

1. Please indicate whether you checked for security information on the following pages

Bank **sign-in** page (where you entered the password):

\_\_\_ yes      \_\_\_ no      \_\_\_ I don't remember  
\_\_\_ I tried to check for security information but could not find it

If **yes**, please select the option that comes closest to your experience:

\_\_\_ I checked for security information: I believe the page was secure  
\_\_\_ I checked for security information: I **do not** believe the page was secure  
\_\_\_ I checked for security information: I found it, but I could not understand it

Other comments:

If **no**, please select the option that comes closest to your experience:

\_\_\_ I did not check for security information, because I do not believe any web connections are secure  
\_\_\_ I did not check for security information, because I believe all bank web sites are secure  
\_\_\_ I did not check for security information, because I do not worry about the security of bank transactions

Other reasons you did not check for security information:

Bank **account information** page (where the balances and other account details were):

\_\_\_ yes      \_\_\_ no      \_\_\_ I don't remember  
\_\_\_ I tried to check for security information but could not find it

If **yes**, please select the option that comes closest to your experience:

\_\_\_ I checked for security information: I believe the page was secure  
\_\_\_ I checked for security information: I **do not** believe the page was secure  
\_\_\_ I checked for security information: I found it, but I could not understand it

Other comments:

If **no**, please select the option that comes closest to your experience:

\_\_\_ I did not check for security information, because I thought the account pages were secure after I signed in  
\_\_\_ I did not check for security information, because I believe all bank web sites are secure  
\_\_\_ I did not check for security information, because I do not believe any web connections are secure  
\_\_\_ I did not check for security information, because I do not worry about the security of bank transactions

Other reasons you did not check for security information:

Hotmail sign-in page: ☐ yes ☐ no ☐ I don't remember  
☐ I tried to check for security information but could not find it

If yes, please select the option that comes closest to your experience:

- ☐ I checked for security information: I believe the page was secure
- ☐ I checked for security information: I **do not** believe the page was secure
- ☐ I checked for security information: I found it, but I could not understand it

Other comments:

If no, please select the option that comes closest to your experience:

- ☐ I did not check for security information, because I felt it was a familiar secure page
- ☐ I did not check for security information, because I do not believe any web connections are secure
- ☐ I did not check for security information, because I believe Google email web sites are secure
- ☐ I did not check for security information, because I do not worry about the security of email passwords

Other reasons you did not check for security information:

Shopping **credit card information** page:

☐ yes ☐ no ☐ I don't remember  
☐ I tried to check for security information but could not find it

If yes, please select the option that comes closest to your experience:

- ☐ I checked for security information: I believe the page was secure
- ☐ I checked for security information: I **do not** believe the page was secure
- ☐ I checked for security information: I found it, but I could not understand it

Other comments:

If no, please select the option that comes closest to your experience:

- ☐ I did not check for security information, because I felt it was a familiar secure page
- ☐ I did not check for security information, because I do not believe any web connections are secure
- ☐ I did not check for security information, because I believe all pages that ask for credit cards are secure
- ☐ I did not check for security information, because I do not worry about the security of credit card transactions
- ☐ I did not check for security information, because I believe that the credit card company will protect me in case of fraud / credit card number theft

Other reasons you did not check for security information:

Do you think you would have treated the information more carefully if it had been your own private data, rather than our research lab's data? That is, would you have behaved any differently with your own passwords, etc?

\_\_\_ Yes

\_\_\_ No

If yes, explain:

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## General Questions about Security and Privacy on the Web

2. How concerned are you about someone having access to your private information (e.g., passwords, bank information) that is sent across web connections? Rate your concern on a scale from 1-5, where 1 is "not at all concerned" and 5 is "extremely concerned" – circle the number that matches your response:

Not at all concerned

1

2

3

4

extremely concerned

5

3. For the following types of information, rate how concerned you are about its safety online (that is, which kinds of personal data are most important to you to protect). Rate your concern on a scale from 1-5, where 1 is "not at all concerned" and 5 is "extremely concerned" – circle the number that matches your response:

Not at all concerned

extremely concerned

a. bank information	1	2	3	4	5
b. bank passwords	1	2	3	4	5
c. email messages	1	2	3	4	5
d. email passwords	1	2	3	4	5
e. credit card number	1	2	3	4	5

Are there other types of data that you are concerned about keeping confidential on the Web? Please specify:

4. Do you think you are more likely to check for security information on a web site you are using **for the first time**, than a web site you have used many times before (and are familiar with)?

\_\_\_ yes, I am more likely to look for security information

\_\_\_ no, I am not more likely to look for security information

Please explain your reasons:

5. Are you more likely to check for security information when shopping with an online retailer (store) that you **do not know**, than when shopping with an online retailer that you are familiar with and trust?

\_\_\_ yes, I am more likely to look for security information

\_\_\_ no, I am not more likely to look for security information

Please explain your reasons:

6. What sorts of evidence did you use when determining whether or not a web page or a web connection is secure?

Check all that apply:

- ☐ didn't use any information
- ☐ "https" in location bar/URL of web page
- ☐ lock or key icon displayed by browser
- ☐ certificate information
- ☐ type of site (e.g., bank, online retailer)
- ☐ type of information being submitted (e.g., passwords)
- ☐ statements on page that say the site is secure
- ☐ other (please specify):

7. Do you feel confident in your abilities to recognize a secure web connection? (That is, one in which your information will be transmitted securely.)

☐ yes ☐ no

8. What do you think would help you to recognize a secure web connection? Feel free to provide any ideas you have. This could be improvements in web browser design, web page design, consumer education, or whatever you can think of.