

CMSC434: Introduction to Human-Computer Interaction

Exam #2 – April 8, 2004 Length: 75 minutes – Total points: 100

(The grader reserves the right to take off up to 3 points for poor handwriting ... so write neat!).

1. a) Produce a thoughtful argument about what role natural-language interaction (NLI) should have in user interfaces. Be sure to list at least three benefits and three limitations of NLI. **(12 points)**

b) Describe one promising possibility for NLI and discuss how you would conduct a usability test and observation to collect some evidence about its strengths and weaknesses. **(18 points)**

2. Examine the following interface:

The screenshot shows a web browser window titled "5465-54B v4.3". The main heading is "FILL OUT THE FORM". Below the heading, it says "The user of this form should type in the following information:". The form contains the following fields and controls:

- Name:
- Street:
- Does the user have insurance? Yes No
- Domicile City, State:
- Zip Code:
- Insurance Carrier:
- Home Phone:
- A "SEND" button.

There is a text box on the right side of the form containing the text: "University of Maryland Hospital Processing Form #5465-54B v4.3".

a) Describe three of the form fill-in design guidelines presented in the book that have been violated by this interface. **(12 points)**

b) For each violation, suggest a way the interface could be changed to fix the problem. **(6 points)**

3. a) Explain the difference between direct-control and indirect-control pointing devices. **(5 points)**

b) Describe a task where it would be more appropriate to use a direct-control pointing device. Do the same for an indirect-control device. **(8 points)**

4. Provide an argument explaining why delays should be kept short for common, everyday tasks of a user. Use knowledge of short-term and working memory as the basis for your argument. **(15 points)**

5. Color displays are attractive to users and can often improve task performance, but the danger of misuse is high. List four guidelines for using color and give an example of each. **(12 points)**

6. Describe the difference between reading on paper and reading on a computer display. Be sure to list at least three disadvantages for each method. **(12 points)**