

COMP3C12 Human-Computer Interaction

May 2001

Answer any THREE questions

Marks for each part of each question are indicated in square brackets.

Calculators not permitted

1. You are designing a multilingual multimedia instruction system. The purpose of the system is to instruct patients in the pharmacy of a London hospital - who do not speak English well - on how to take their prescribed medication correctly. The idea is that the pharmacist would place the patient in front of the system, and select the medication and native language.
  - i) Identify 6 different items of information that need to be communicated to patients by the system; state and justify which media should be used to communicate each of the 6 items.

112 Marks)
  - ii) State and justify which input/output device(s), and which dialogue style(s) you would select for this system.

112 Marks)
  - iii) Explain the design principle of *redundancy* in the multimedia design context, and give an example where/how you would use it in this system.

{ 9 Marks }

[Total 33 Marks]

Turn Over/Continued

2. Your company has won a contract to install SEEME, a ubiquitous multimedia system to establish audio and video links between offices and coffee rooms. Your client wants to install it to promote information-sharing and collaboration between their 3 (geographically distributed) research labs.

i) Explain Buxton's concept of seamless transition, and give an example of how it could be applied to the design of this system.

{ 8 Marks }

ii) There have been cases of networked multimedia systems being rejected by users because of privacy issues. Identify 3 potential privacy issues that might arise with this system.

{ 9 Marks }

iii) Describe Adams & Sasse's model of user perception of privacy in multimedia systems; state why and how you would apply the model in the design and deployment of SEEME.

116 Marks

[Total 33 Marks]

3. a) Discuss the features, including their strengths and weaknesses, of the following three user interfaces styles: *menu driven style*; *natural language style*; *direct manipulation style*.

118 Marks)

b) Discuss how you might make use of *virtual partner* and *virtual world* interface capabilities in a system for users to choose and book their holidays.

115 Marks

[Total 33 Marks] Turn Over/Continued

4. a) Seymour & Powell used the metaphor of "car central locking" to design a new house burglary alarm system. Could the same metaphor be used as a starting point for a better user interface to password authentication on computers? Justify your answer.

116 Marks 1

- b) Explain how the HCI framework for design could be applied to designing effective and usable security systems.

117 Marks 1

[Total 33 Marks]

5. Distributed games are very popular with 18-35 year old males. A games company is trying to create a distributed game that would appeal to over-40s in general.

- a) Outline in brief the plan for a user study to determine whether over-40s would be interested in distributed games at all, and what experience a game would have to provide to appeal to them. State what data you require and which methods you would use to collect them.

117 Marks)

- b) The games company has produced a number of prototype games for over-40s, and is asking you to evaluate these. Identify 4 evaluation criteria that are specific to games and entertainment applications, and explain how you would measure them.

116 Marks 1

[Total 33 Marks]

End of Paper