

OLLSCOIL NA hÉIREANN, GAILLIMH
THE NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER II EXAMINATIONS 1999/2000

Third Examination in B.Sc. in Information Technology

CT318: HUMAN COMPUTER INTERACTION

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Time allowed: TWO hours

Answer **Question 1** and any **two** other questions of your choice
All questions carry equal marks

1. You have been asked to design an interactive system for a sports club (select sport of your choice). The sports club wants the system to hold membership details, player rankings, its own competition results, and up to date information on national and international results for this sport (e.g. at the professional level). They have stressed the importance of an effective, easy to use interface for their members, as well as a robust design as the system will be accessible in public areas, both to club members and also to members of the general public for general club or sport information.

(a) Outline the stages and methods you would follow in the design of the above system from initial requirements collection through to usability testing.

[8]

(b) Produce a paper prototype of at least three of the main interface screens, outlining your rationale for each of the design choices you make.

[6]

(c) Describe an evaluation plan for the system which will support comprehensive testing of your design.

[6]

2. (a) *Effective interactive systems design is a complex problem, with technology only one part of the solution.*

Discuss this statement drawing on all relevant aspects of your HCI studies. Include relevant examples, where appropriate, to support your opinions.

[12]

(b) What is contained in an evaluation plan for an interactive system?

Briefly outline an evaluation plan for each of the following systems:

A meeting support tool

A corporate website

An interactive computer game

[8]

3. Write a detailed description of three of the following subjects, illustrating your answer with practical examples where relevant:

UIMS

Xerox Star

Task Analysis

Mental Models & HCI

Usability Testing

[20]

4. (a)

(i) The choice of an interaction style is very often the first decision made by an interface designer in designing an interactive system. Compare and contrast three different approaches to computer-based interaction, using practical examples to illustrate your answer.

[9]

(ii) Which style would you apply to the design of a hand-held device whose purpose is to act as an individual and organisational memory aid? and why?

[3]

(iii) Regardless of the style adopted, user feelings of competence and control, when interacting with the system, can be empowered through a number of means – identify at least three of these and indicate how you would integrate them into your chosen design style from (ii) above.

[4]

(b) Write a note on the role of GUI style guides in the design of effective interactive systems.

[4]