

Unit 8 - Week 5: M5-Computational user models (contemporary)

Course outline

How does an NPTEL online course work?

Week 0: Assignment on Prerequisites

Week 1: Introduction

Week 2: Engineering User-Centric Systems

Week 3: User-Centric Computing

Week 4: Computational user models (classical)

Week 5: M5-Computational user models (contemporary)

Lec 18: 2D and 3D pointing models

Lec 19: The Steering Law for constrained navigation

Lec 20: Model for hierarchical menu selection

Lec 21: Mobile typing models (single finger and two thumb typing)

Lec 22: Model for touch performance (FFitts' law)

Quiz : Assignment 5

Weekly feedback form for week 5

Solution: Assignment 5

Week 6: Formal system models

Week 7: Empirical Research Methods

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Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-04, 23:59 IST.

1) Bivariate Pointing Model is _____.

1 point

- a refinement of the Fitts' law
 a refinement of the Hick-Hyman Law
 a model for 2D pointing
 a model for 3D pointing

No, the answer is incorrect.
Score: 0

Accepted Answers:
a refinement of the Fitts' law
a model for 2D pointing

2) Match the following:

- I. 1D Pointing A. Volumetric displays
 II. 2D Pointing B. Ambiguous index of difficulty
 III. 3D Pointing C. Bivariate Pointing Model

1 point

- I-A, II-C, III-B
 I-C, II-B, III-A
 I-B, II-C, III-A
 I-B, II-A, III-C

No, the answer is incorrect.
Score: 0

Accepted Answers:
I-B, II-C, III-A

3) For modeling menu based selection process, _____.

1 point

- Fitt's law is sufficient
 Steering law is sufficient
 both the Fitt's law and Steering law are required
 together the Fitt's law and steering law are not sufficient – a new model is required

No, the answer is incorrect.
Score: 0

Accepted Answers:
both the Fitt's law and Steering law are required

4) One of the simplest forms of the steering law is $MT=A+B \times D/W$. In this equation, the values of the two constants, A and B, are _____.

1 point

- 176 and 64
 -188 and 78
 -188 and 64
 176 and 78

No, the answer is incorrect.
Score: 0

Accepted Answers:
-188 and 78

5) Following are considered as the fundamental touch operations for touchscreen device.

1 point

- Tap, and scroll
 Tap, scroll, and swipe
 Tap, scroll, multi-touch gesture
 Single tap, double tap, and scroll

No, the answer is incorrect.
Score: 0

Accepted Answers:
Tap, scroll, multi-touch gesture

6) Consider the following statements and choose the correct options below:

1 point

- I. Vertical movements are Fitts' law tasks
 II. Horizontal movements are Selection law tasks
- Only I is true
 Only II is true
 Both are true
 Both are false

No, the answer is incorrect.
Score: 0

Accepted Answers:
Only I is true

7) In "Bivariate Pointing Model" when we try to control only the amplitude error, the task is called _____ pointing task.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) amplitude

1 point

8) Distribution of touch points on a touch screen device is sum of TWO independent distributions. These are: Distribution due to the _____ precision of the finger and distribution due to the absolute precision of the finger

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: String) relative

1 point

9) In target acquisitions with finger touch, surface area of the fingertip may be relatively larger compared to the target size. In that case, target is partially occluded from our view. This problem is termed as _____.

1 point

- occlusion problem
 fat finger problem
 target acquisition problem
 target size problem

No, the answer is incorrect.
Score: 0

Accepted Answers:
fat finger problem

10) We should rule out the Fitts' law, when the miss rate is likely to be much higher than the tolerable limit. What is the limit?

1 point

- 4%
 10%
 30%
 40%

No, the answer is incorrect.
Score: 0

Accepted Answers:
4%