

May 4, Sensing and User Models – Ubiquitous User Interfaces

Name

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_____ / 7 points

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1) We discussed language based versus action based interaction. Imagine you have a graphical display with a turtle.

a) What would be an example of an action-based interaction to move the turtle across the screen? (1 point)

Touch the turtle (with mouse or finger depending on display) and drag it across the screen.

Or: move it around with gestures if the UI is gesture-based.

b) What would be an example of a language-based interaction to move the turtle across the screen? (1 point)

Type in something like: move straight ahead, turn right, turn left.

Or: say it loud (if you have voice-command)

2) Name three communication channels that we discussed (3 points)

All four:

1. **Visual**
2. **Acoustic**
3. **Chemical**
4. **Tactile**

3) Ubiquitous computing systems often aim to provide multi-modal interaction, and implicit/invisible interaction. What is difficult about this? We discussed four key challenges – name one and explain (1 sentence approx.) (2 points)

All four:

- 1) **Novel interfaces: Outside known “interface language” (metaphors, icons, terminology...)**
- 2) **Disappearing interfaces: How to interact with an invisible system?**
- 3) **Technology Driven Design: Beyond being cool, what existing problem is solved?**
- 4) **Costs: How expensive will a widespread use of the system be?**