

Pen-Based Gestural User Interfaces

Lecture #6: Gestures
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Fall 2007

What is a Pen Gesture?

- Simple ink stroke or strokes to convey an idea
 - fast to perform
 - easy to remember
- Typically disappear after they are recognized
- Supports in-band interaction



Gesture Types

- Single stroke
- Multi-stroke
 - compound gestures
 - punctuated gestures
- Trade-off in recognition between single and multiple stroke gestures
- Used in
 - modeling
 - command languages
 - invoking interface widgets



Single stroke gesture



Multi-stroke gesture

Gestures in Modeling

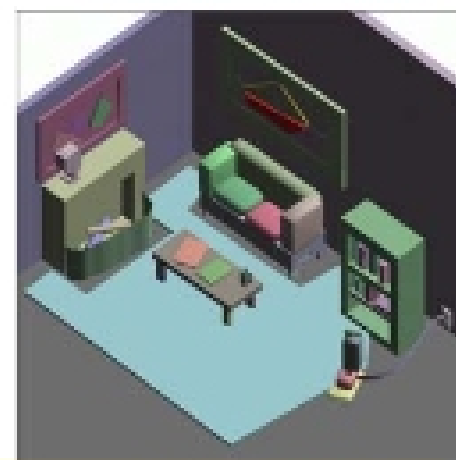
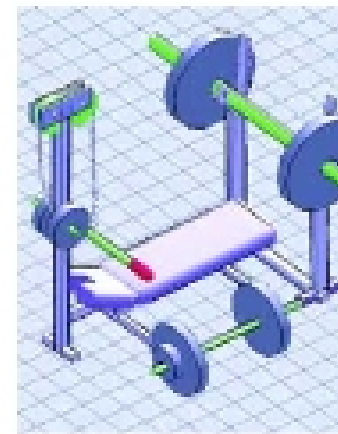
- Used in 2D/3D object modeling
- Distinction between sketch-based modeling and gestures in modeling
- Used to
 - create geometry
 - manipulate geometry
 - guidance for computational algorithms



www-ut.ls.s.u-tokyo.ac.jp/~takeo/research/teddy/teddy.htm

SKETCH

- Seminal work by Zeleznik et al. (1996)
- Conceptual modeling
- Uses simple lines and curves to build geometric primitives
 - cubes, cylinders, pyramids, etc...
- No machine learning-based recognition used
 - simple FSA
- Does make use of modifier keys



SKETCH Gesture Set (1)

