Design Activity

Application scenario

- immersive educational software (HMD)
- allow students to visit a faraway place and learn about its history

- Egyptian pyramids
- view and visit interesting locations in and around the pyramids
- access multimedia information within the VE
- play a game to increase interest
Travel requirements

- “tour” metaphor
- travel to several known locations, not necessarily in order
- very large-scale space
- large areas with no interesting information

Selection/Manipulation requirements

- select multimedia objects to hear audio, play video, view images, etc.

- game: rebuild the Sphinx
  - broken-off pieces of stone lying next to Sphinx
  - student must select pieces
  - student must manipulate pieces to put back into correct place
Your tasks

• Select an input device for this application (next slide)
• Design interaction techniques using that device for each of the tasks in the application:
  – travel technique
  – selection/manipulation techniques
• Be sure to consider:
  – affordances
  – constraints
  – feedback
  – comfort
  – efficiency
• Develop rationale for your choices
• Use sketches/storyboards/interaction scenarios to describe your interface

Input device choices

- Pinch gloves: can detect any contact between 2 or more fingers; can be tracked
- Wand: position and orientation tracker; 4 buttons; 2 DOF joystick
- Pen & Tablet: tracked physical pen and tracked physical tablet; can display any virtual 2D interface; pen can be used separately
- Twiddler: 12-button device; can detect “chords” of 2 buttons; can be tracked