Interactive Kinect Art
KinectSkeletons

Kelli Ireland
CS 2310 – Fall 2011
Final Project
KinectSkelettons

- Inspiration
- Design
- Implementation
- Demo
- Potential Future Directions
Inspiration

• Originally conceived as an installation art piece for Halloween
• Image would be projected onto a garage door or other plain surface
• As kids approach for candy, they would appear as skeletons or ghosts
Input from the Kinect → Find relevant points → Use relevant points → To project a different image

Like a skeleton

Or a video game character
Design

• Requirements:
  – Make it easy to change which character is projected
  – Make it easy to change which background is projected
  – Multi-user
Design

USB

KinectSkeletions

openFrameworks

openFrameworks

Open NI
Implementation

• openFrameworks
  – Graphics, window management

• ofxOpenNI
  – OpenNI addon for openFrameworks
  – Kinect support
  – User-specific and limb code was fairly heavily modified for this project

• IDE: Xcode 4.0.2
Implementation

• ofxOpenNI had to be extended
  – Did not have capability to associate images with limbs

• Challenges included
  – Transparency of limb pictures (so that limbs wouldn't appear to be in boxes)
  – Correct rotation of limbs, not flipping upside-down
  – Proper scaling of limbs during movement
• [http://www.youtube.com/watch?v=rulV_nhdLaw](http://www.youtube.com/watch?v=rulV_nhdLaw)
Demo
Demo
Demo
Potential Future Directions

• Have random characters appear
• Custom installations for holidays, etc.
• Use as a starting point for games
• Animation generation for videos