Kinect

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What is the Kinect

- Video and Audio sensor for Xbox 360 and 1
- SDK came out in 2011
- Version 1 and Version 2
Video

- 4-12 feet coverage
- IR and RGB video
- Depth sensor
Video

- 3 Cameras (2 RGB 1 IR) (1.0 - 1.8)
- Both are used to find depth (1.0 - 1.8)
- Built in facial recognition
Sound

- Ignores “acoustic sources” and “ambient noise”
- I.E. Stops music and barking dogs from coming through Xbox Party Chat
Sound

● Built in audio command recognition in several languages

● Built in voice recognition*

● *Not supported in all countries
Developing

- Only presenting on Kinect for Windows (no Xbox)
- SDK and code examples are all free on http://www.microsoft.com
Developing

- Windows 7 (or higher) for 1.0 - 1.8
- Windows 8 (8.1) for 2.0
Developing

- Must use Visual Studio (owned by Microsoft)
- Microsoft Speech Platform (owned by Microsoft)
- C# best choice (Also owned by Microsoft)
Linux Support

- November 10, 2010 driver for Linux created by non Microsoft entity
- Both RGB cameras and Depth tracking
- Idea and funding came from Microsoft employee
Developing

- Version 1-1.8
  - 32-bit (x86) or 64-bit (x64) processor
  - Dual-core 2.66-GHz or faster processor
  - Dedicated USB 2.0 bus
  - 2 GB RAM
  - A Microsoft Kinect for Windows sensor

- Version 2.0
  - 64-bit (x64) processor
  - Dual-core 3.1-GHz or faster processor
  - Dedicated USB 3.0 bus
  - 2 GB RAM
  - DX11 capable graphics adapter
  - A Microsoft Kinect for Windows v2 sensor
Kinect Studio!

- Audio, Depth, Color, and 3D model
- Works with any Kinect application
- Best Kinect debugging tool ever
Developing

- Skeleton is basic object for a person
- Easily distinguish between people
- Lines separated by joints
Developing

- Voice commands build in support
- Map<"voice", function>
- Only one voice command accepted
Potential Applications

● Lawlor Bot 2.0

● Tracking Erik Talvi 2.0

● Spying on people while they sleep
Things Microsoft Does with the Kinect Without Your Consent

- Spying on people while they sleep
- (Microsoft got a LOT of crap for having the Kinect 2.0 always be on for the Xbox 1)
Questions?
Demo!

- Laptop cannot “Kinnect” to projector
Sources

http://en.wikipedia.org/wiki/Kinect

Microsoft Kinect Developer code version 1.0 and 1.8