



OpenKinect

The OpenKinect Community

Josh Blake - Project Lead

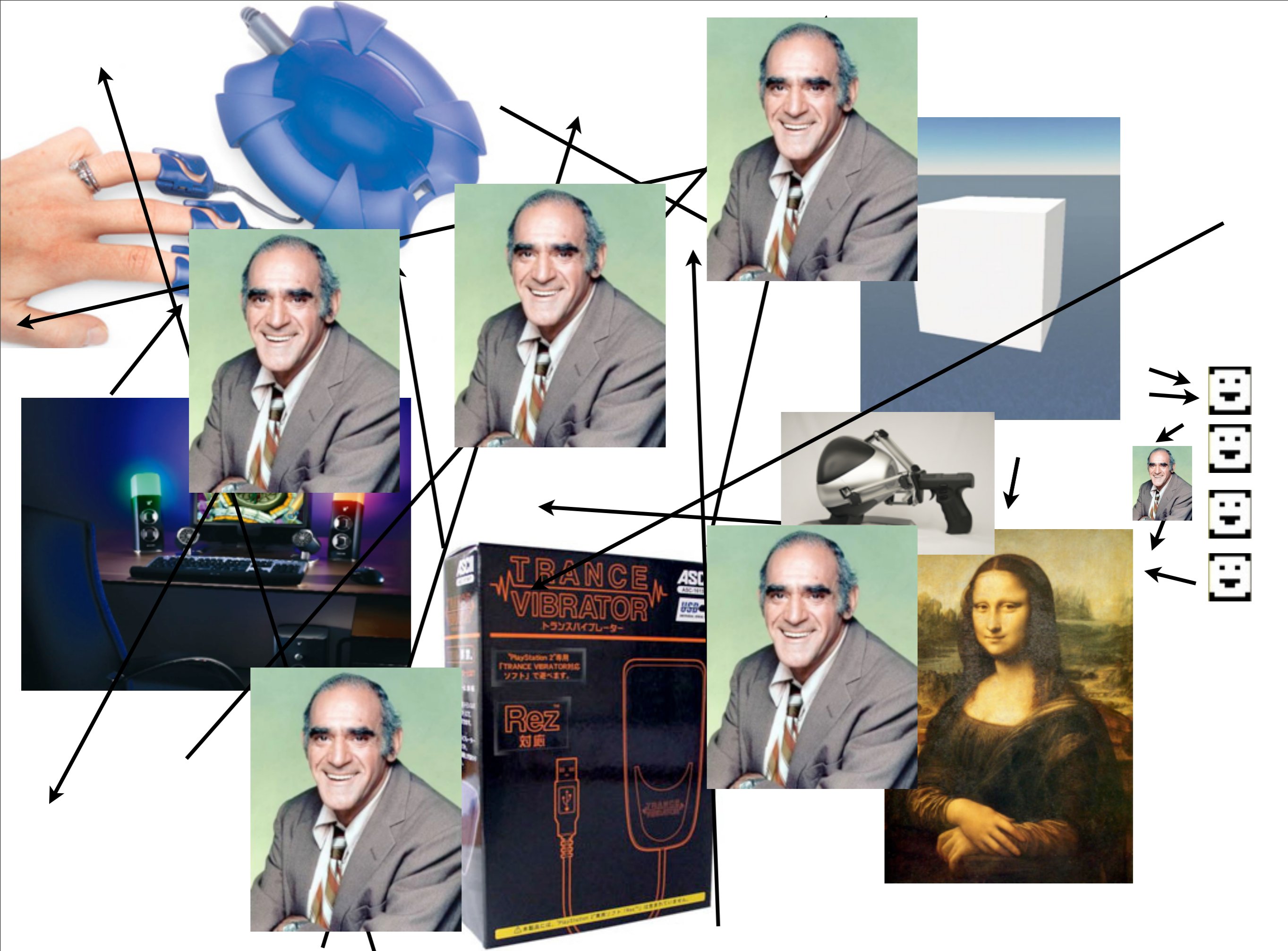
Hector Martin Cantero - Engineering Lead

Kyle Machulis - Integration and Engineering

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@qdot on twitter

<http://www.nonpolynomial.com>

[Test Pattern!]



[Absolute confusion!]

[Sounds of disgust!]



[Yay!]



[Whee!]



<http://www.youtube.com/watch?v=nvvQJxgykcU>

**[Academic
understanding!]**



[Pffft!]

**What does this solve
for us?**

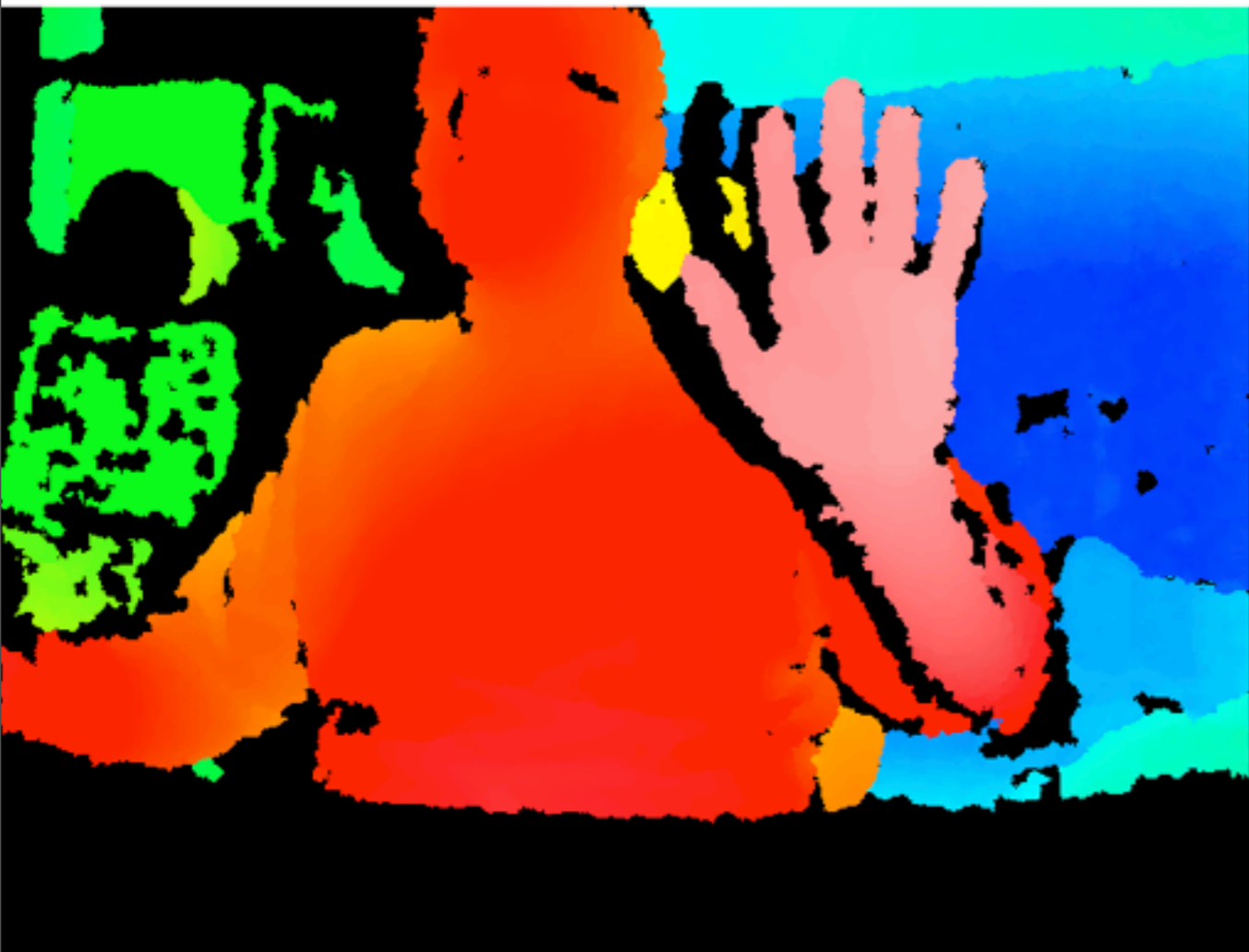
Segmentation

Background Subtraction

[Sounds of learning!]



<http://www.vimeo.com/296403>



[Ooooooh!]

Day 0 Release





[Yay!]



[Gasp!]

```

bcdUSB                2.00
bDeviceClass          0 (Defined at Interface level)
bDeviceSubClass       0
bDeviceProtocol       0
bMaxPacketSize0      64
idVendor              0x045e Microsoft Corp.
idProduct             0x02ae
bcdDevice             1.0b
iManufacturer         2 Microsoft
iProduct              1 Xbox NUI Camera
iSerial               3 A00366A08793039A
bNumConfigurations    1
Configuration Descriptor:
  bLength              9
  bDescriptorType      2
  wTotalLength         32
  bNumInterfaces       1
  bConfigurationValue  1
  iConfiguration       0
  bmAttributes         0xc0
    Self Powered
  MaxPower             16mA
Interface Descriptor:
  bLength              9
  bDescriptorType      4
  bInterfaceNumber     0
  bAlternateSetting    0
  bNumEndpoints        2
  bInterfaceClass      255 Vendor Specific Class
  bInterfaceSubClass   255 Vendor Specific Subclass
  bInterfaceProtocol   255 Vendor Specific Protocol
  iInterface           0
Endpoint Descriptor:
  bLength              7
  bDescriptorType      5
  bEndpointAddress     0x81 EP 1 IN
  bmAttributes         1
    Transfer Type      Isochronous
    Synch Type         None
    Usage Type         Data
  wMaxPacketSize       0x0bc0 2x 960 bytes
  bInterval            1
Endpoint Descriptor:
  bLength              7
  bDescriptorType      5
  bEndpointAddress     0x82 EP 2 IN
  bmAttributes         1

```

Day 1

MS speaks out

[??????????]

Day 3

Code Laboratories and the Ransom



<http://www.youtube.com/watch?v=I8vSblw5SNk>

[Maybe yay?]



[Boooo!]

Day 5

We get dumps



enuminit - Total Phase Data Center

File Edit Analyzer View Help

518.10 MB

Sp	Index	m:s.ms.us	Len	Err	Dev	Ep	Record	Summary
	0	0:00:000.000					Capture started (Aggregate)	[11/09/10 21:41:02]
	1	0:00:000.000					Bus event	<Host connected>
HS	2	0:07:934.342					Bus event	<High-speed>
HS	3	0:07:934.342	1 B	I			OUT packet	81
	4	0:07:934.342	250 ms	T			Bus event	<Reset> / <Target disconnected>
FS	5	0:08:743.754					Bus event	<Full-speed>
FS	6	0:08:743.761	16.2 us				Bus event	<Reset> / <Chirp J> / <Tiny J>
FS	7	0:08:743.777	131 us				Bus event	<Reset> / <Target disconnected>
FS	8	0:08:743.908	41.7 us				Bus event	<Reset> / <Chirp K> / <Tiny K>
	9	0:08:743.950	164 ms	T			Bus event	<Reset> / <Target disconnected>
FS	10	0:08:945.774					Bus event	<Full-speed>
FS	11	0:08:948.774	96.3 ms				Bus event	<Suspend>
FS	12	0:09:047.105	526 us				Bus event	<Reset> / <Chirp J> / <Tiny J>
FS	13	0:09:047.631	1.91 ms				<Chirp K>	
FS	14	0:09:049.543	53.1 us				Bus event	<Reset> / <Chirp J> / <Tiny J>
FS	15	0:09:049.596	48.5 ms				[453 Chirp K-J pairs]	
FS	923	0:09:098.135	318 us				Bus event	<Reset>
HS	924	0:09:098.454					Bus event	<High-speed>
HS	925	0:09:098.454	10.6 ms				[86 SOF]	[Frames: 1905.x - 1916.1]
HS	926	0:09:109.137	8 B		00	00	Get Device Descriptor	Index=0 Length=8
HS	939	0:09:109.205	125 us				[2 SOF1]	[Frames: 1916.2 - 1916.3]

Text LiveSearch

No filter: 2.140 M records.

Protocol Lens: USB

Command Line

```

1> open
2> open(u'C:/Documents and Settings/ladyada/My
Documents/Projects/kinect/USBlogs/enuminit.tdc', True)
Buffer cleared.
File opened.

```

Details

Offset	0	1	2	3	4	5	6	7	ASCII
0x0000									

Ready

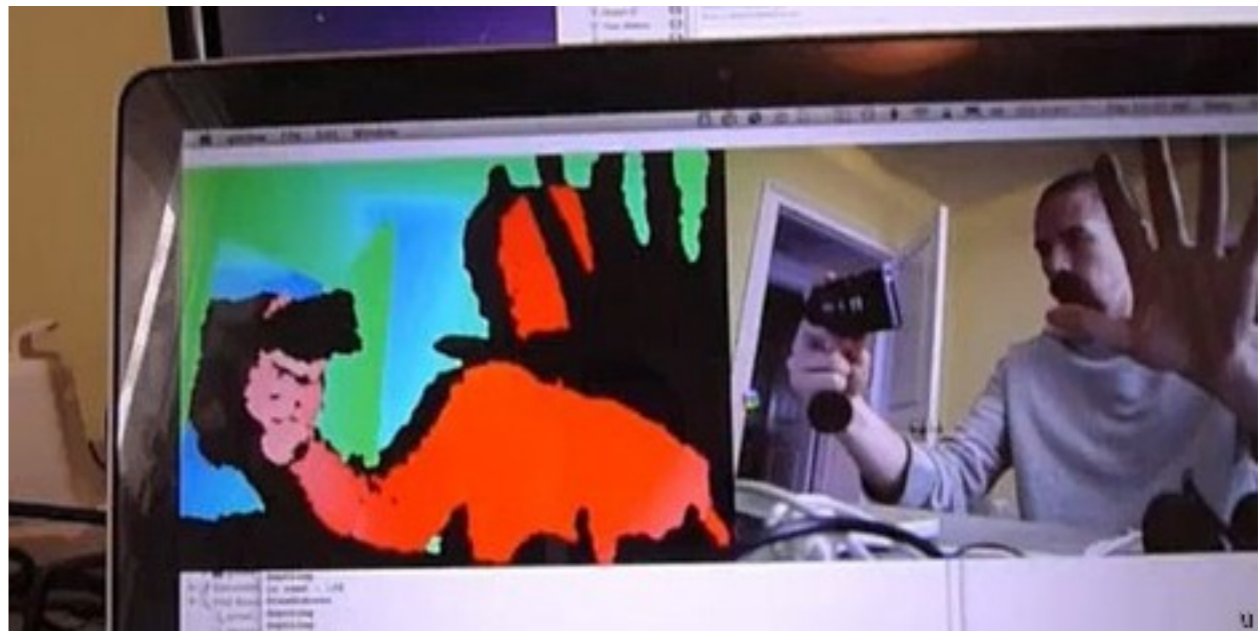
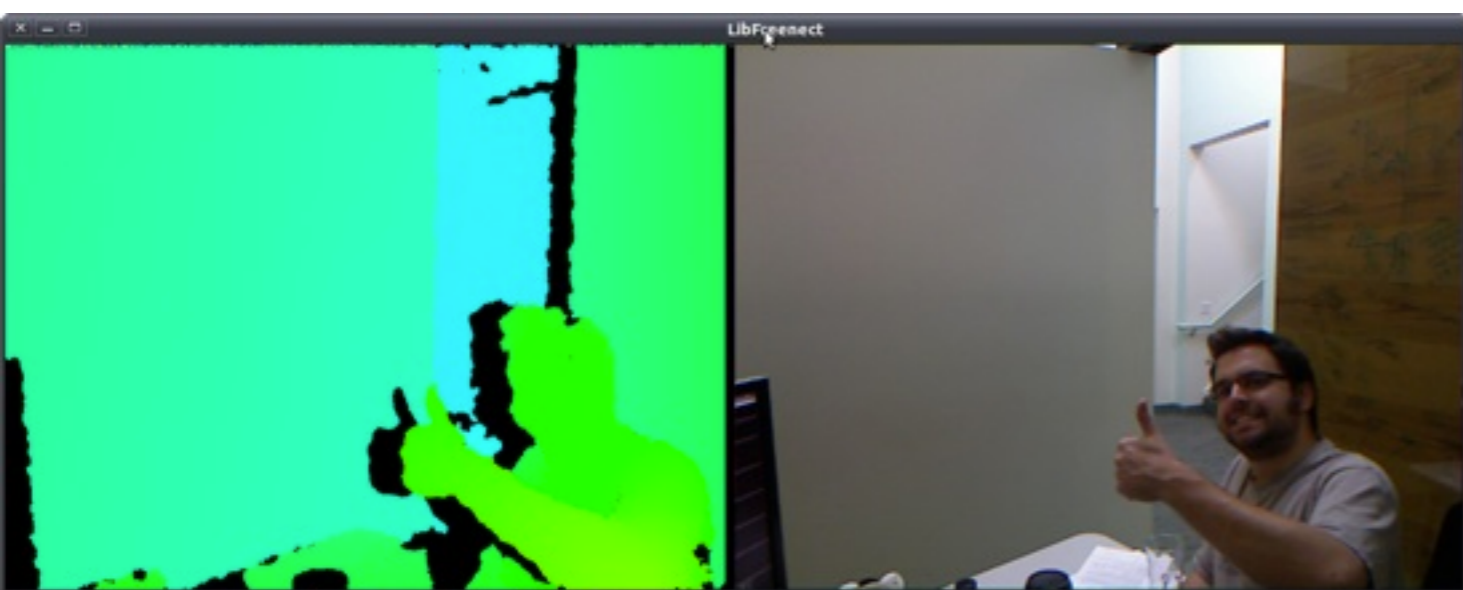
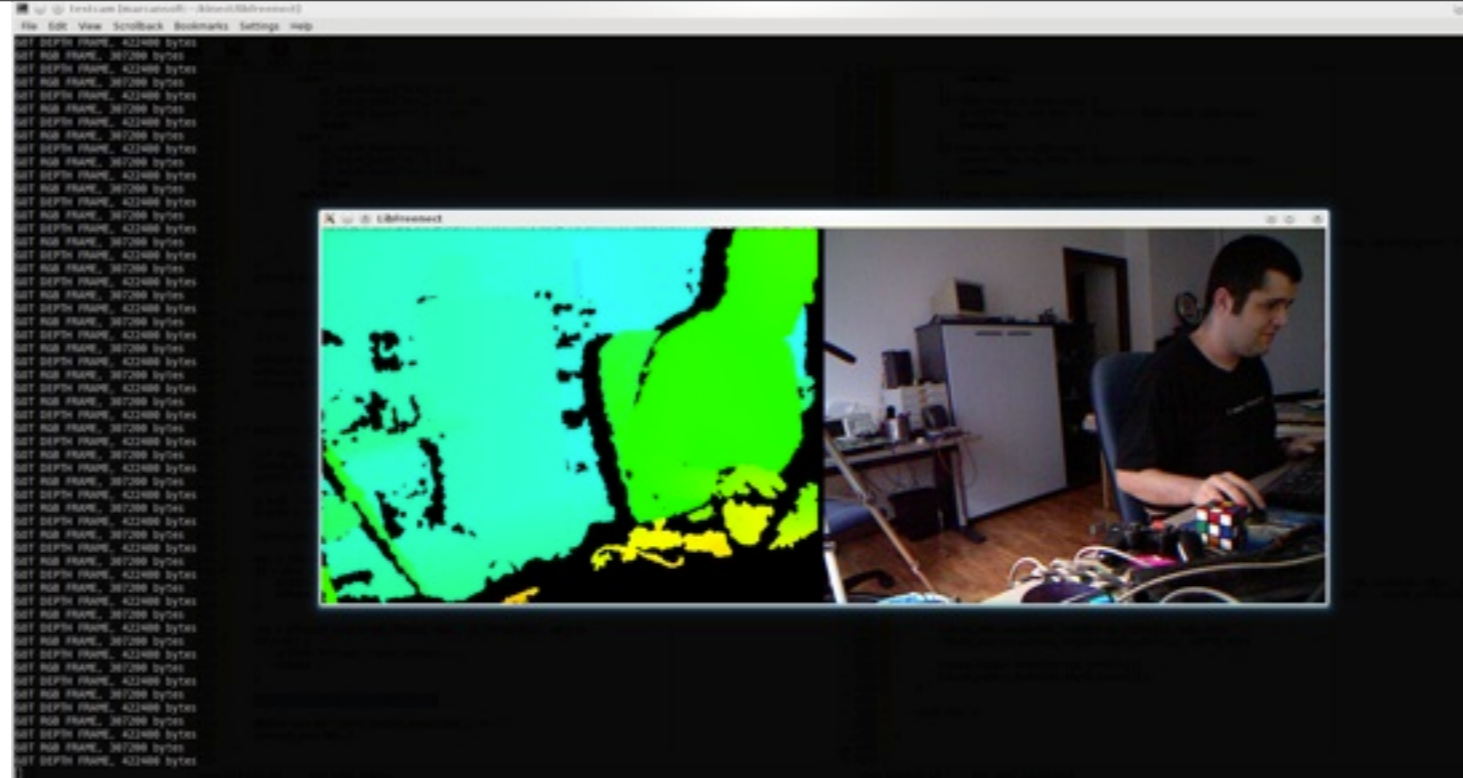
Disconnected

EN

[Sound of Interest!]

Day 6

Damn it, Europe



[Half Yay Half Boo!]

Day 7

The Community Begins

<http://www.github.com/openkinect/>

OpenKinect / libfreenect

Unwatch

Fork

Your Fork

Pull Request

140

25

Source

Commits

Network

Pull Requests (4)

Fork Queue

Issues (9)

Wiki (20)

Graphs

Branch: master

Switch Branches (2)

Switch Tags (0)

Branch List

Drivers and libraries for the Xbox Kinect device on Windows, Linux, and OS X — [Read more](#)

Downloads

SSH

HTTP

Git Read-Only

git@github.com:OpenKinect/libfreenect.git



This URL has **Read+Write** access

Don't segfault if kinect not connected.



Kenneth Johansson (author)

about 8 hours ago



JoshBlake (committer)

about 7 hours ago

commit 67c0d076abf40c7be5f0
tree e0c81e0e621ad3bbcd54
parent 562a7b28eb7ab7d7f361

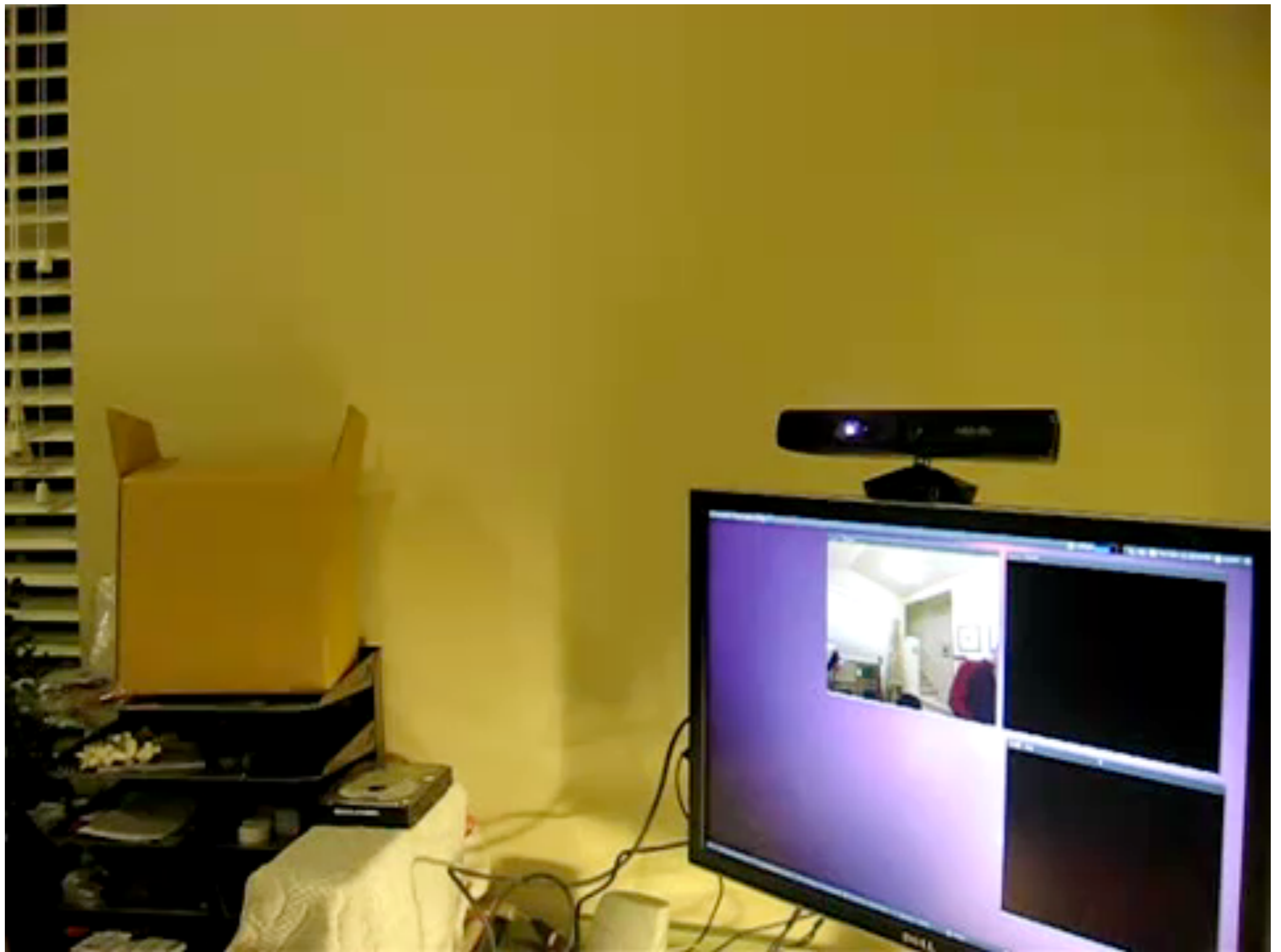
libfreenect /

name	age	message	history
.gitignore	5 days ago	Merge remote branch 'marcan/master' [qdot]	
APACHE20	1 day ago	Add new license headers and files [marcan]	
GPL2	1 day ago	Add new license headers and files [marcan]	
LICENSE-2.0.txt	5 days ago	Updated drivers [JoshBlake]	
README.asciidoc	about 11 hours ago	Fix from roefer (https://github.com/roefer) to ... [qdot]	
c/	about 8 hours ago	Don't segfault if kinect not connected. [Kenneth Johansson]	
csharp/	5 days ago	Reshuffled csharp stuff into csharp directory [qdot]	

Day ∞

Oh god the future why won't it stop

<http://idav.ucdavis.edu/~okreylos/ResDev/Kinect/>



<http://www.youtube.com/watch?v=cRBozGoa69s>

The Kinect Sensor in Mobile Robotics: *Initial Experiments*

Philipp Robbel
Personal Robots Group
MIT 2010

<http://www.youtube.com/watch?v=dRPEns8MS2o>

**[Sounds of
amazement!]**

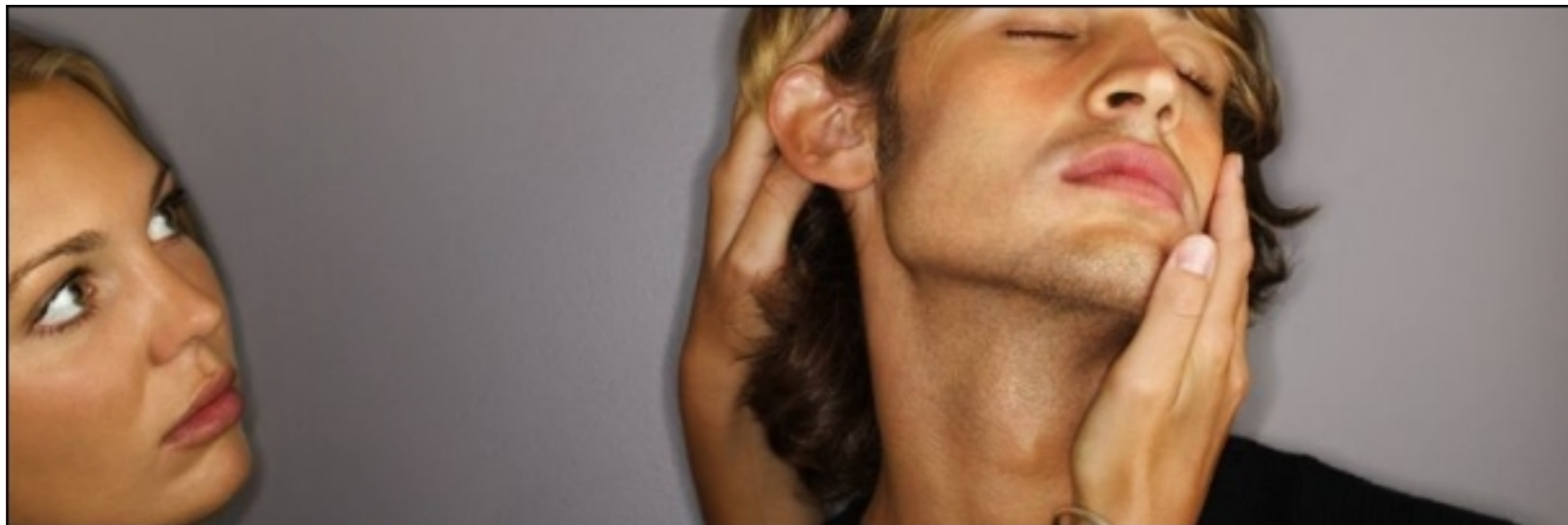
But what do */you/* want
to do, Kyle?



[Laughter!]



=

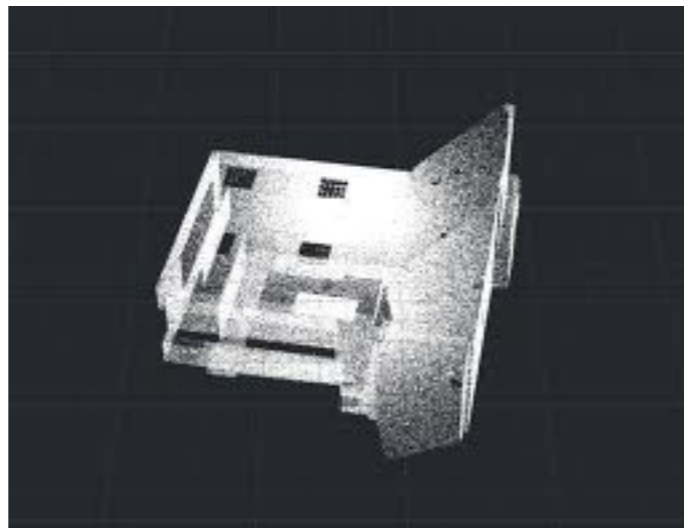


[Ewww!]





=





=



[Neat!]

Who's Got Drivers?

- C
- C++
- Java
- Processing
- OpenFrameworks
- Jitter via OfxSyphon (Jitter external soon)

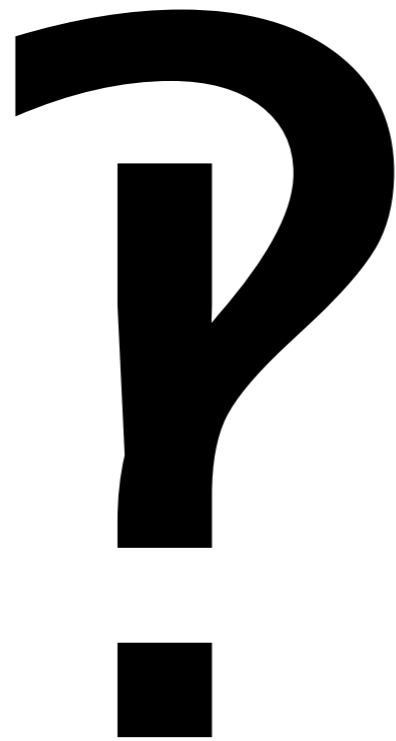
Thanks to

- The OpenKinect Community

[Lots of Applause!]

Where to Go

- <http://www.openkinect.org>
- OpenKinect group on google groups (500+ members)
- #openkinect on Freenode
- @openkinect on twitter



**[Complete, utter,
uncomfortable silence!]**