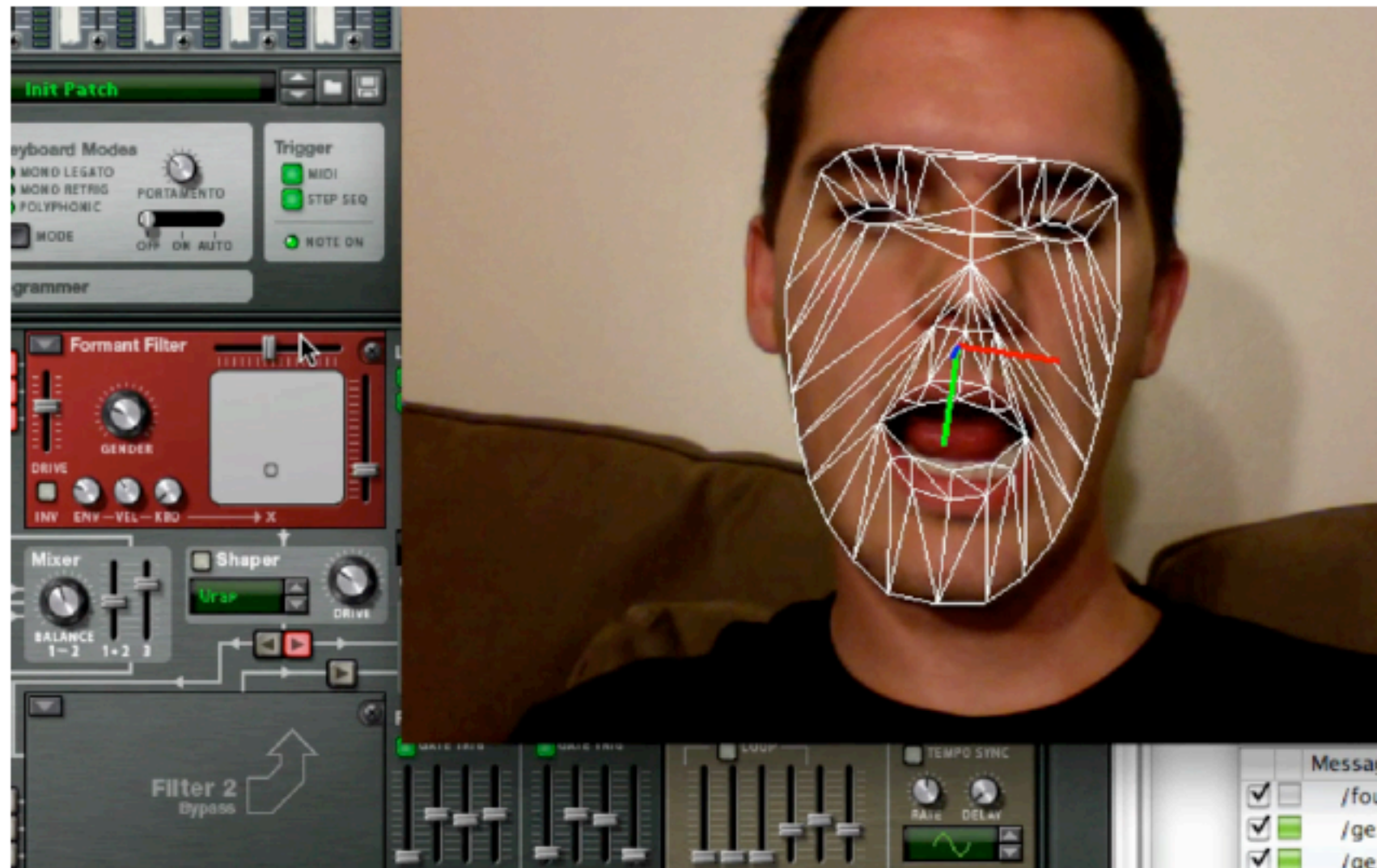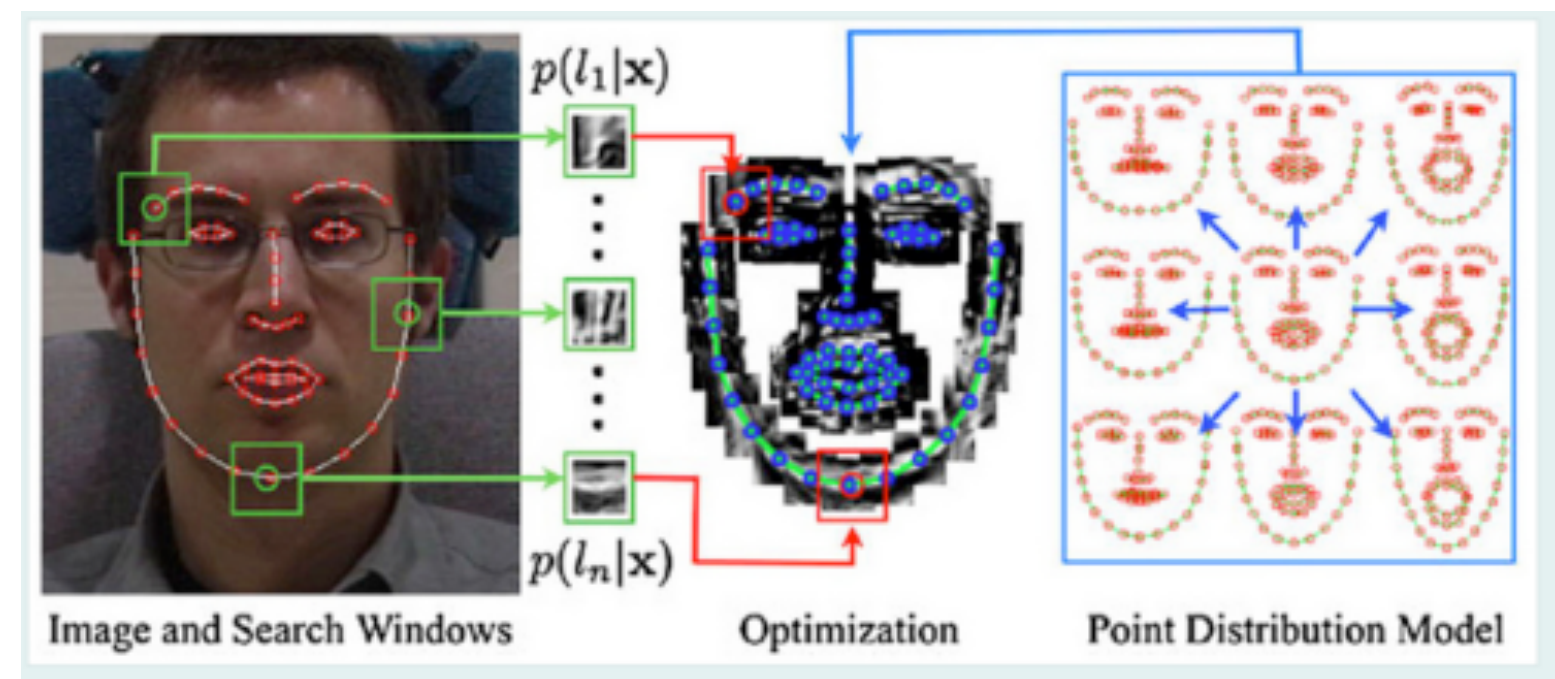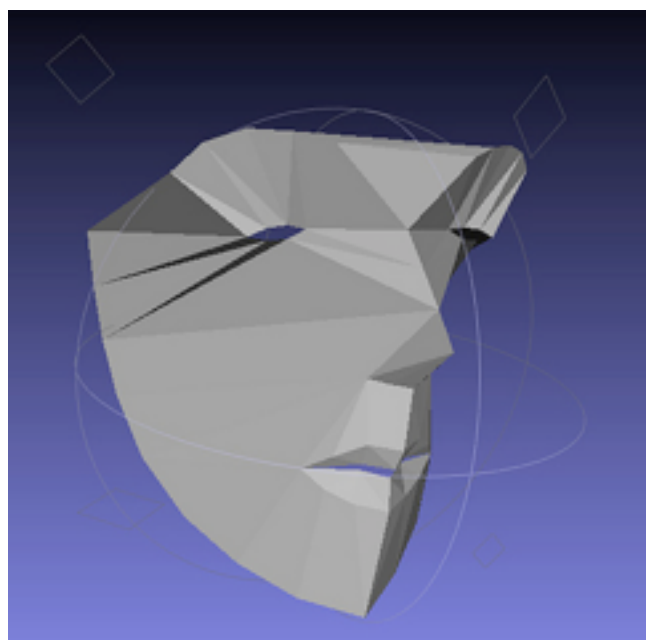faceTracker
faceOSC

FaceTracker is a C++ library for deformable face tracking

Authored by **Jason Saragih** and maintained by **Kyle McDonald**.

Tries to detect faces and fit a model to the detected features

Kyle adopted the original code to work with openFrameworks and collaborated with Arturo Castro on several projects using the library.
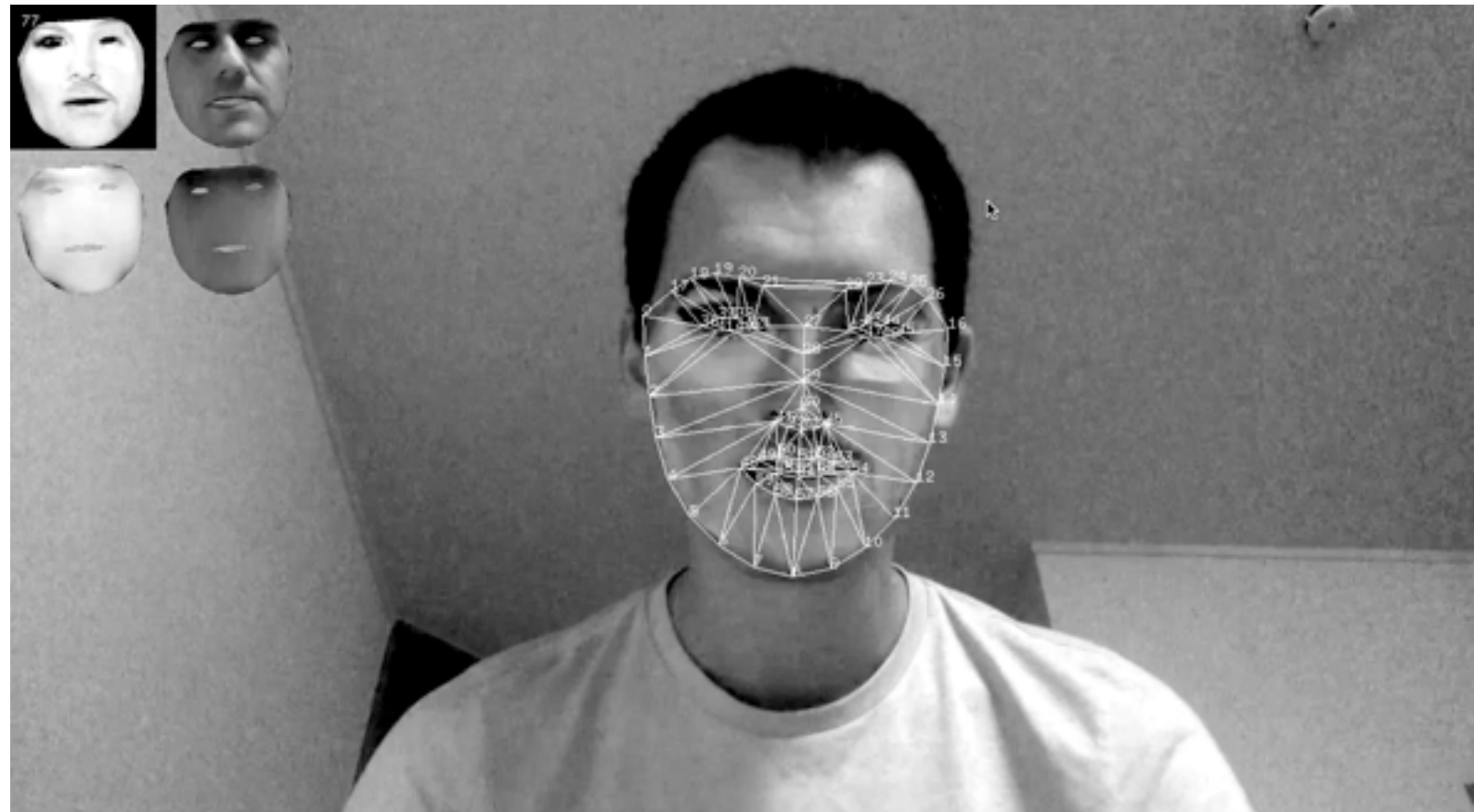

$p(l_1|\mathbf{x})$

$p(l_n|\mathbf{x})$

Image and Search Windows   Optimization   Point Distribution Model
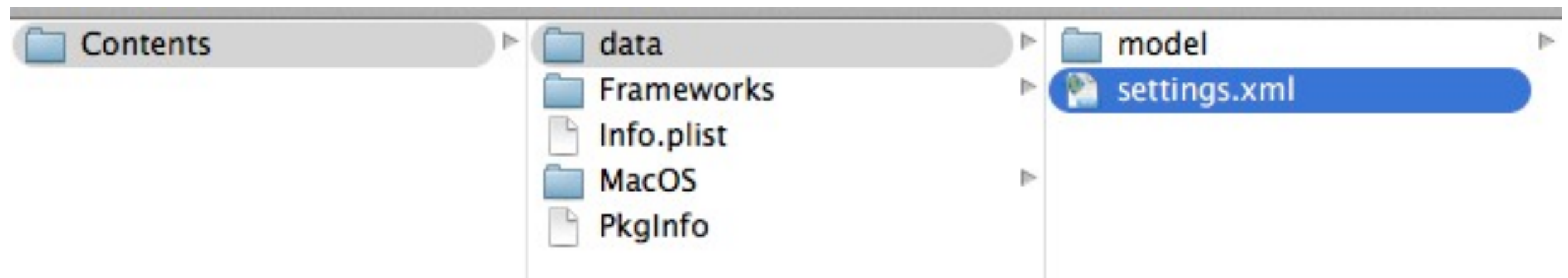
strength: 1

Face Substitution

faceOSC

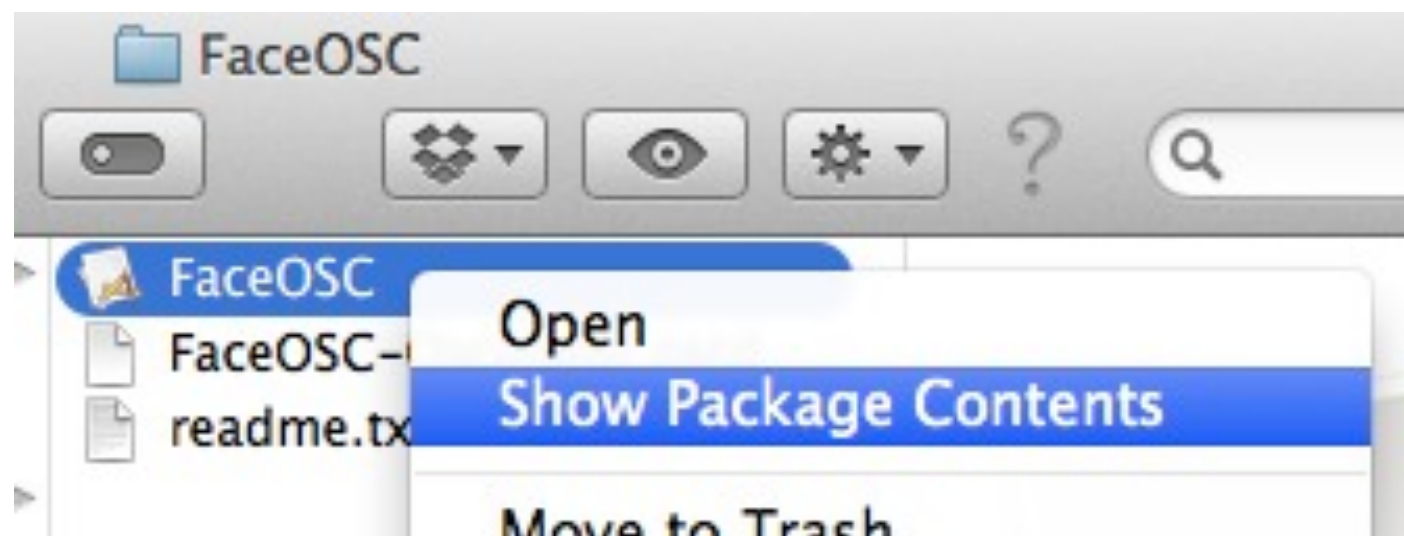- stand-alone application that uses FaceTracker

- transmits facial feature data via Open Sound Control

- allows use of the tracking data in other applications that can receive OSC : Processing, Pure Data, Ableton Live, Quartz Composer etc.

https://github.com/kylemcdonald/ofxFaceTracker/downloads

Changing faceOSC settings:

Inside the FaceOSC package there is an xml file called
settings.xml that

Changing faceOSC settings:

port: must be the same in both applications (defaults to 8338)

host: localhost will send to the same computer otherwise find the correct ip address of the computer you are sending to

```
<!-- osc output settings -->
<osc>
    <host>localhost</host>
    <port>8338</port>
</osc>
```

OSC Messages

OSC uses an address protocol to identify data sent

Associated with the address are values in sequence

For example, FaceOSC sends a single integer value (0 or 1) with the address: /found

FaceOSC address specification:

Always sent

/found i: 0 or 1 if a face is currently being tracked

Sent when a face is being tracked

/pose/position ff: center coordinate position of the tracked face in the capture dimensions (camera w & h, default is 640x480)

/pose/scale f: size of the tracked face (smaller when farther from the camera)

/pose/orientation fff: 3d vector denoting the orientation of the tracked face (looking left, angled, down, etc)

/gesture/mouth/width f: left to right of mouth

/gesture/mouth/height f: top to bottom of inner mouth

/gesture/eyebrow/left f: center of the eye to middle of eyebrow

/gesture/eyebrow/right f: center of the eye to middle of eyebrow

/gesture/eye/left f: upper inner eye to lower outer eye

/gesture/eye/right f: upper inner eye to lower outer eye

/gesture/jaw f: nose center to chin center

/gesture/nostrils f: left side of nose to right side of nose

https://github.com/kylemcdonald/ofxFaceTracker/wiki/Osc-message-specification