Equalizer

Quickstart and Demonstration Guide

Latest version at http://www.equalizergraphics.com/documents/EqualizerGuide.pdf

Building Equalizer

- Linux, Mac OS X:

```
cd src; make [debug|release|xcode]
```

- Windows:
  - Create VS Solution using CMake
  - Open and build solution file

Running the eqPly Example

- Linux:

```
src# ./debug/Linux/bin/eqPly
```

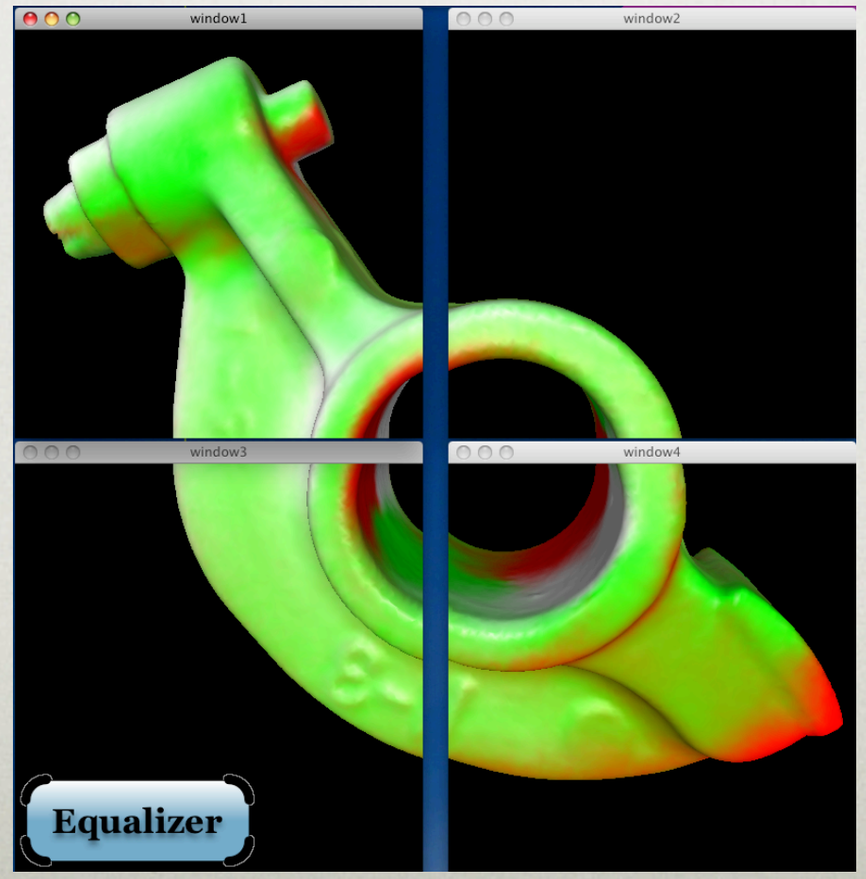
- Mac OS X:

```
src# ./debug/Darwin/bin/eqPly.app/Contents/MacOS/eqPly
```

- Windows:
  - debug ‘eqPly Example’
  - **OR**: `[BuildDir]\bin\Debug\eqPly.exe`

Running the Example Application

- Press F1 for help
- If another configuration is running, use --eq-config <path>/4-window.all.eqc

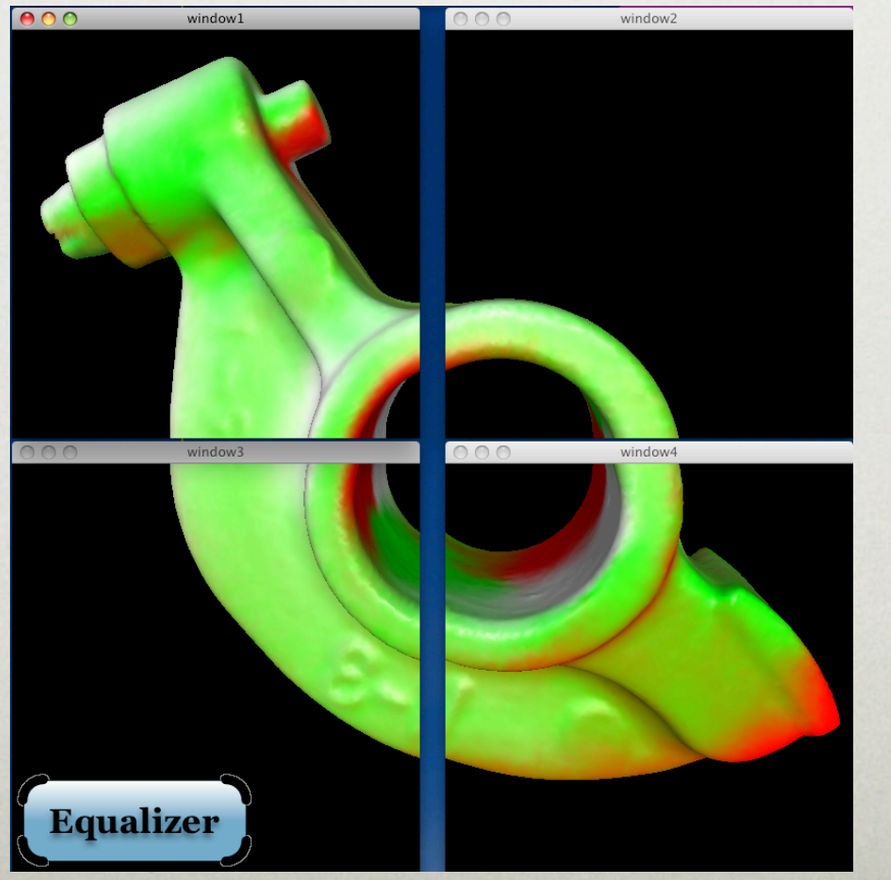


Exploring Equalizer

- Switch layout using ‘l’ to show a different feature
  - New layout name is shown for two seconds
- Load multiple models with ‘--model <filename | dirname>’
  - Sample Models at www.cyberware.com

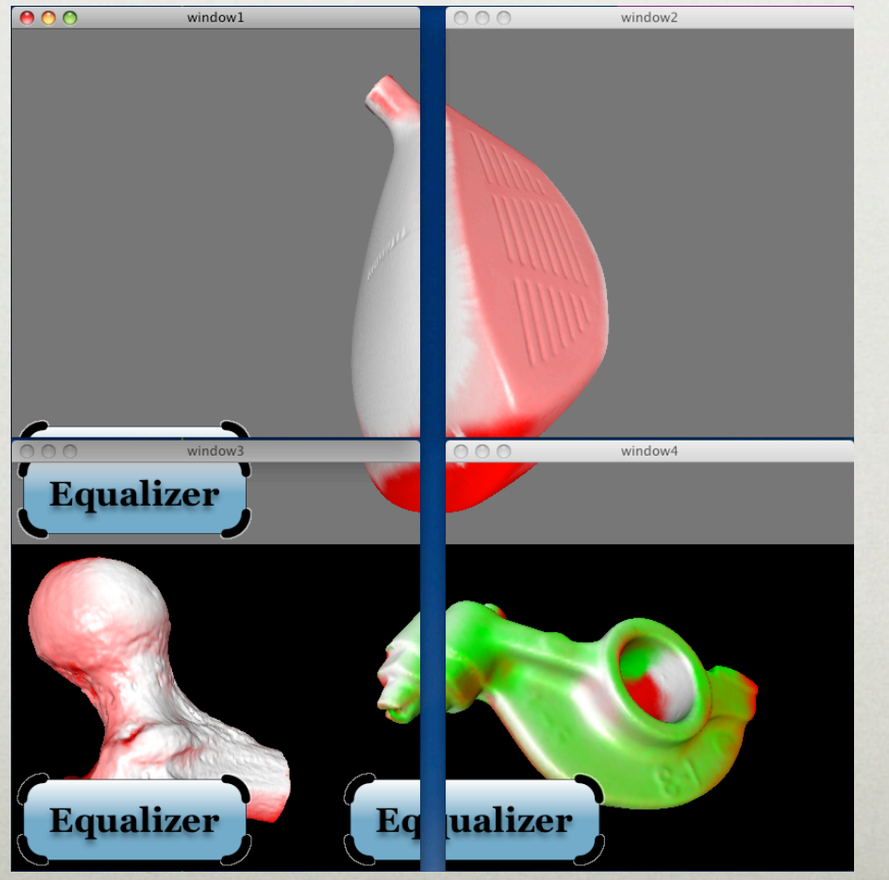
Layout Wall

- Four windows, four pipes
- To be deployed on four separate GPU's
- Software swap synchronization



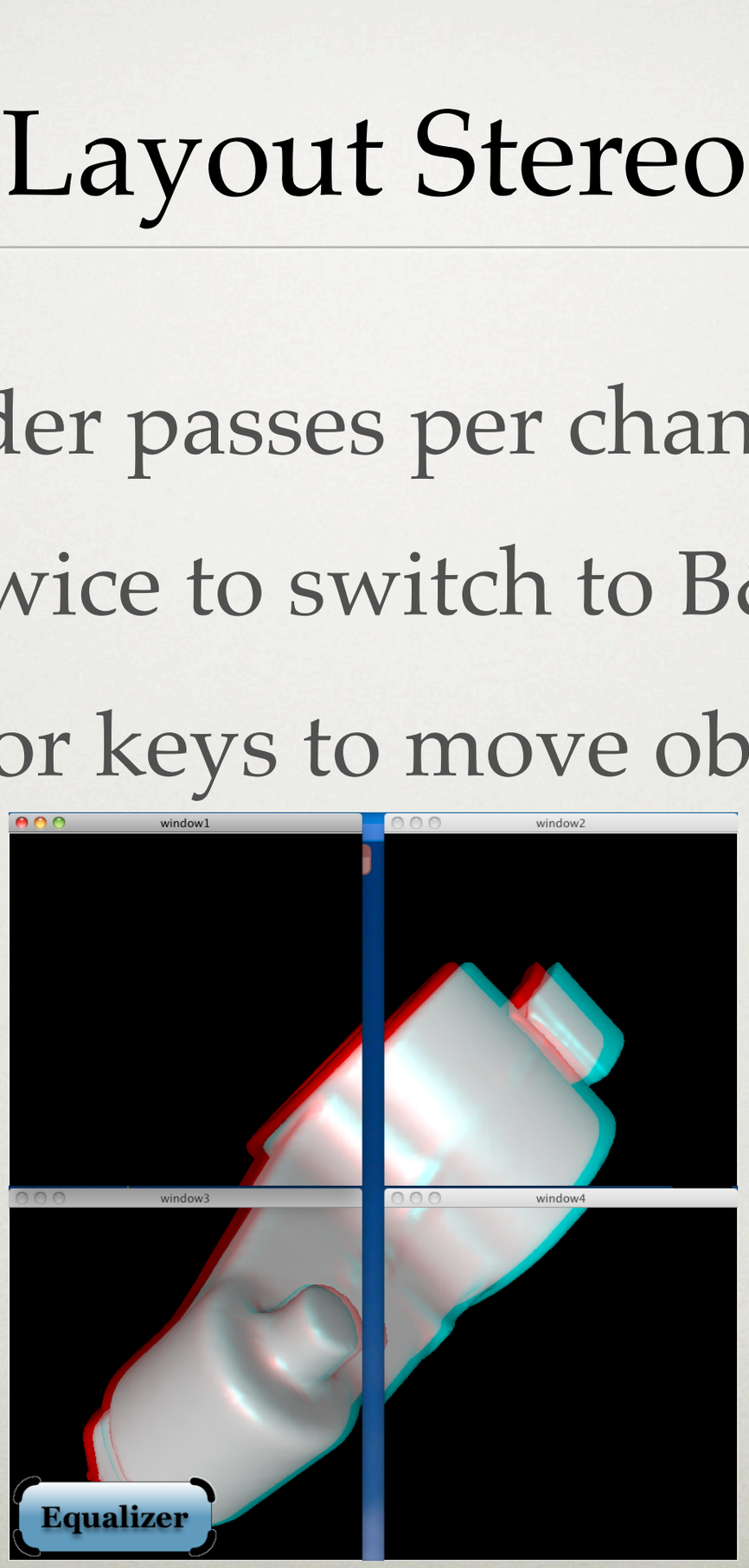
MultiView

- Three views on four windows
- Click in view to activate
- Use ‘m’ to change model of active view



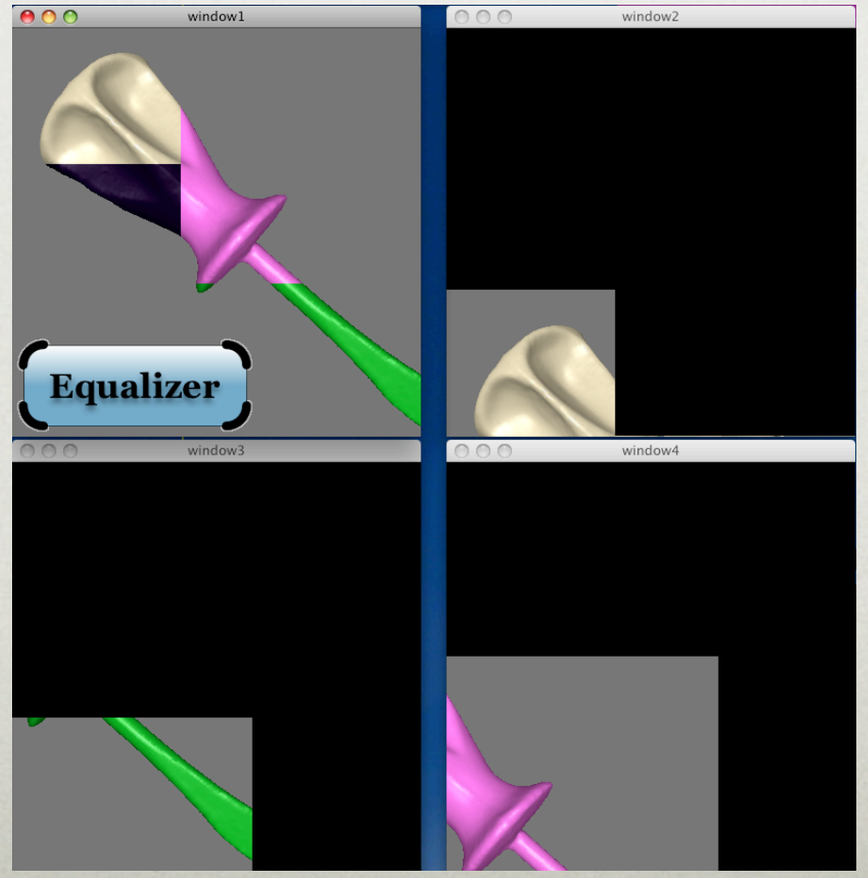
Layout Stereo

- Two render passes per channel
- Use ‘d’ twice to switch to B&W mode
- Use cursor keys to move observer



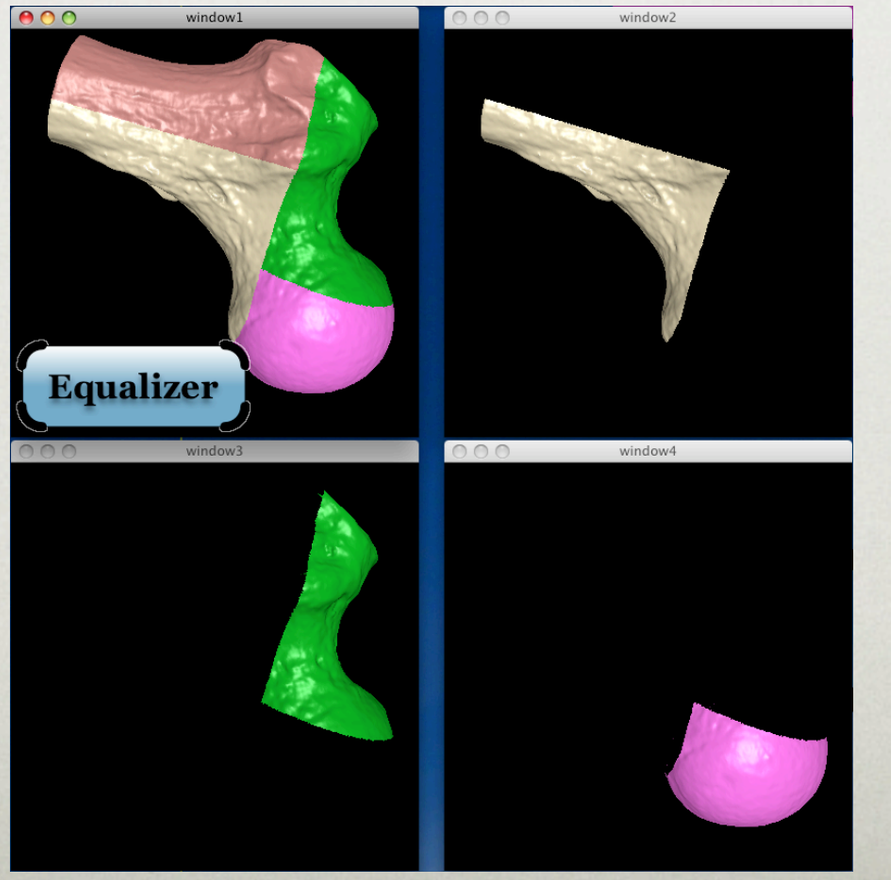
2D

- Screen-space decomposition with automatic load-balancing
- Use ‘d’ to switch to demo color mode



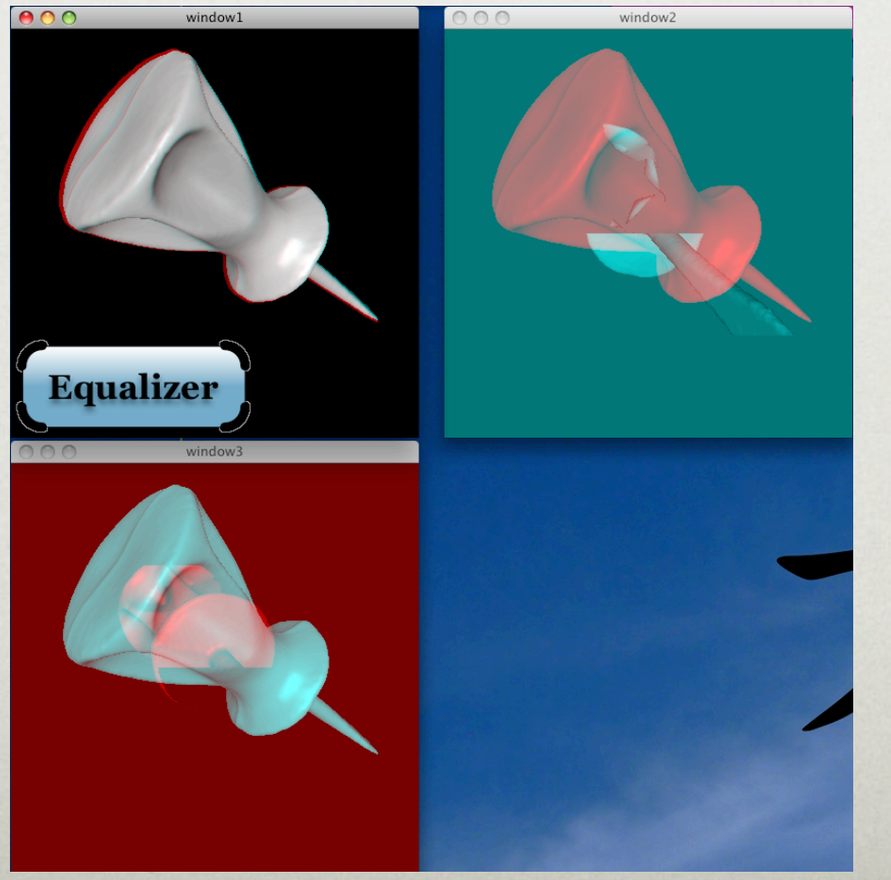
DB

- Database decomposition
- Each window renders ¼ of the data
- Data is combined using Z-Buffer



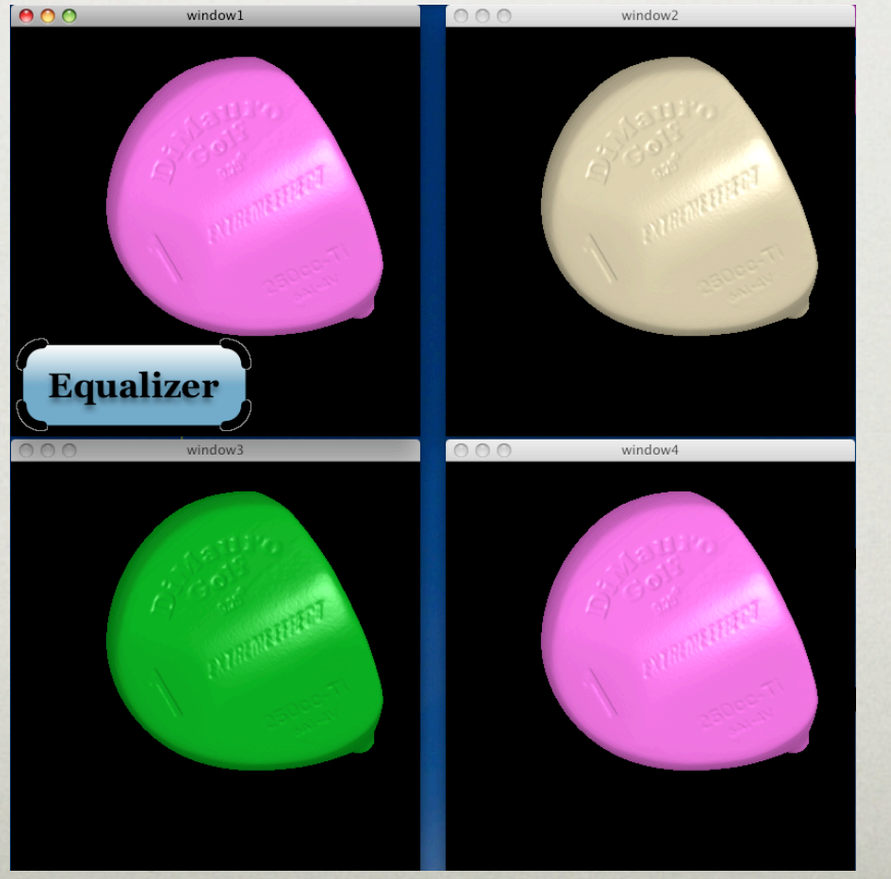
Eye

- Each window renders one eye pass
- Use ‘d’ to switch to black&white
- Active, passive and anaglyph stereo



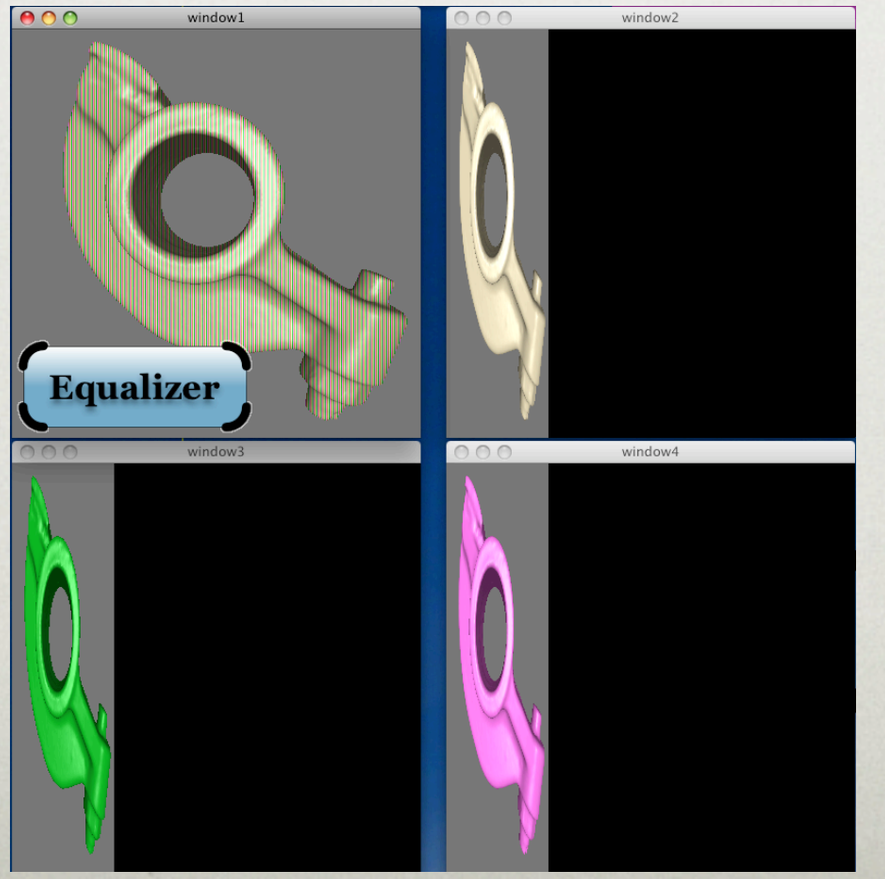
DPlex

- Time-multiplex
- Each window renders every 3rd frame
- Excellent load-balancing



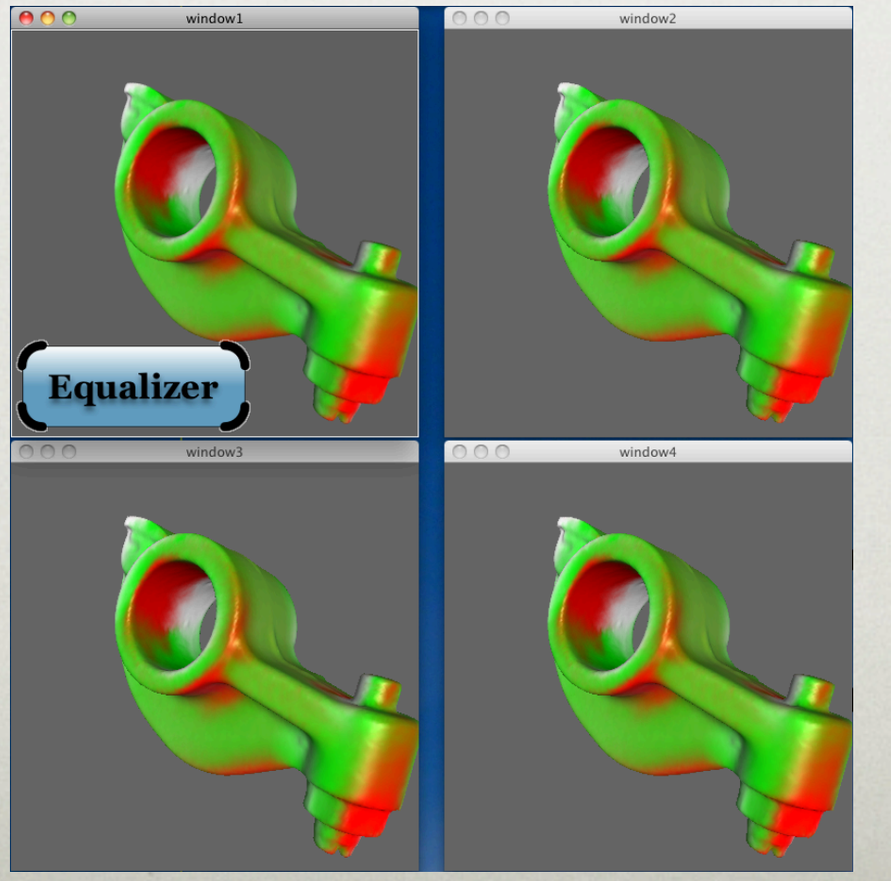
Pixel

- ‘Interlaced’ distribution of pixels
- Ideal for purely fill-limited applications
- Volume Rendering, Raytracing



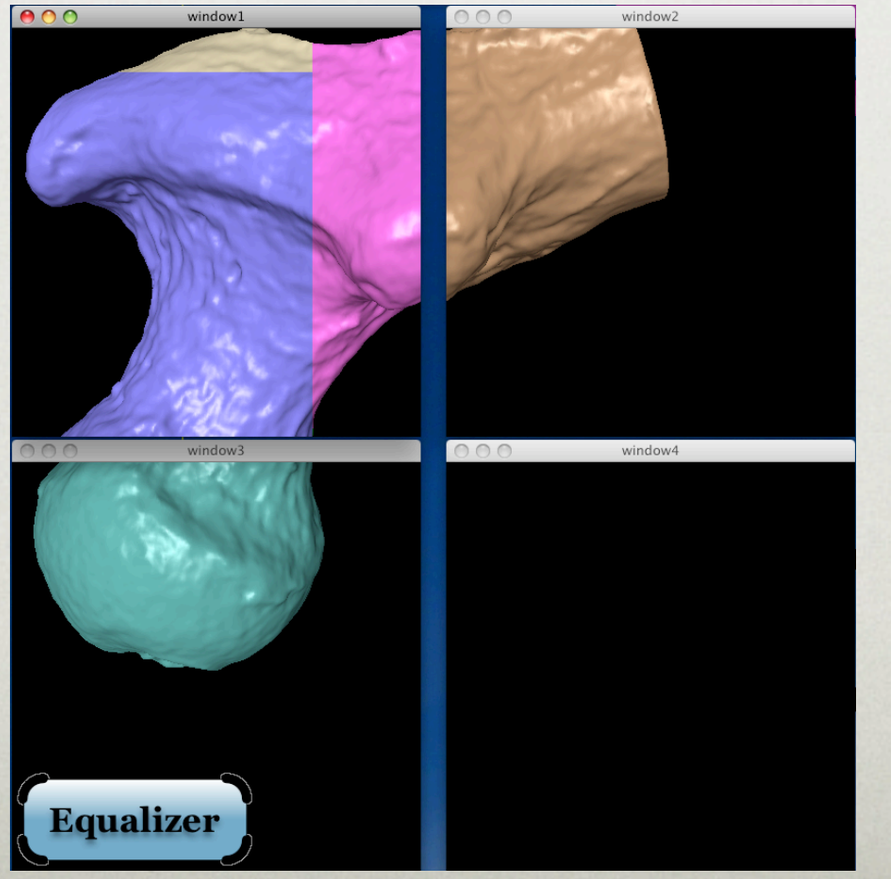
SubPixel

- Multisampling Decomposition
- e.g. Anti-aliasing or Depth-of-Field
- Combined with ‘idle multisampling’



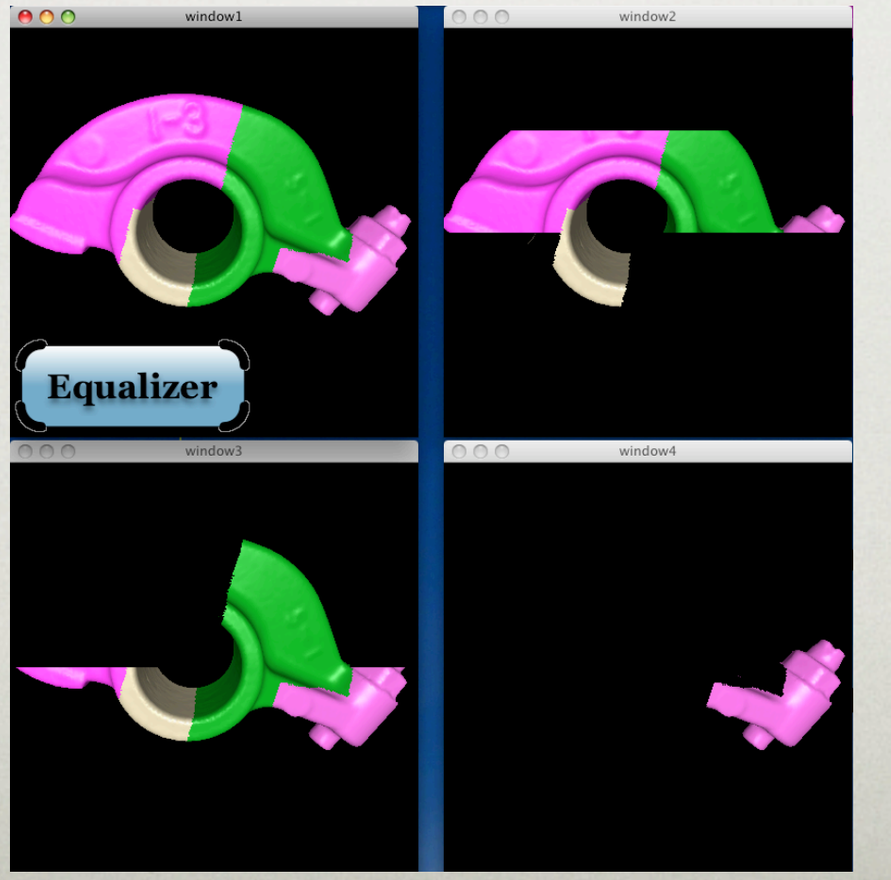
WallLB

- Cross-segment load-balancing
- Underused segments render for others
- Per-segment 2D compound



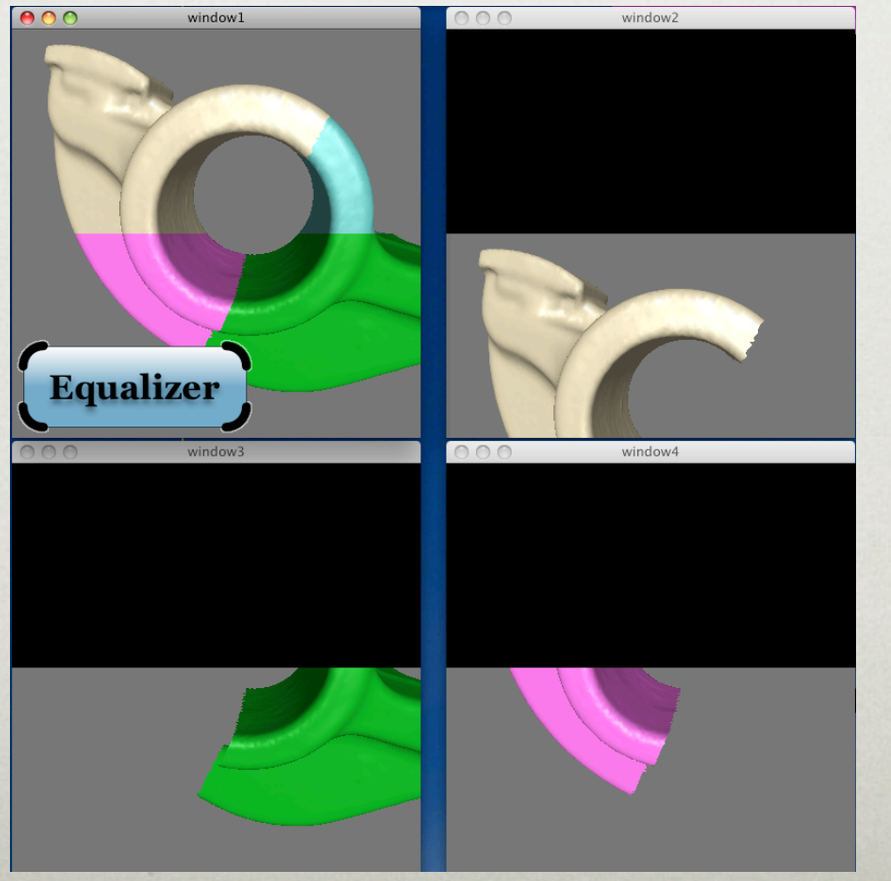
Stream, DirectSend, BinarySwap

- Parallel compositing for DB compounds
- Each channel renders and composites
- See website for algorithm details



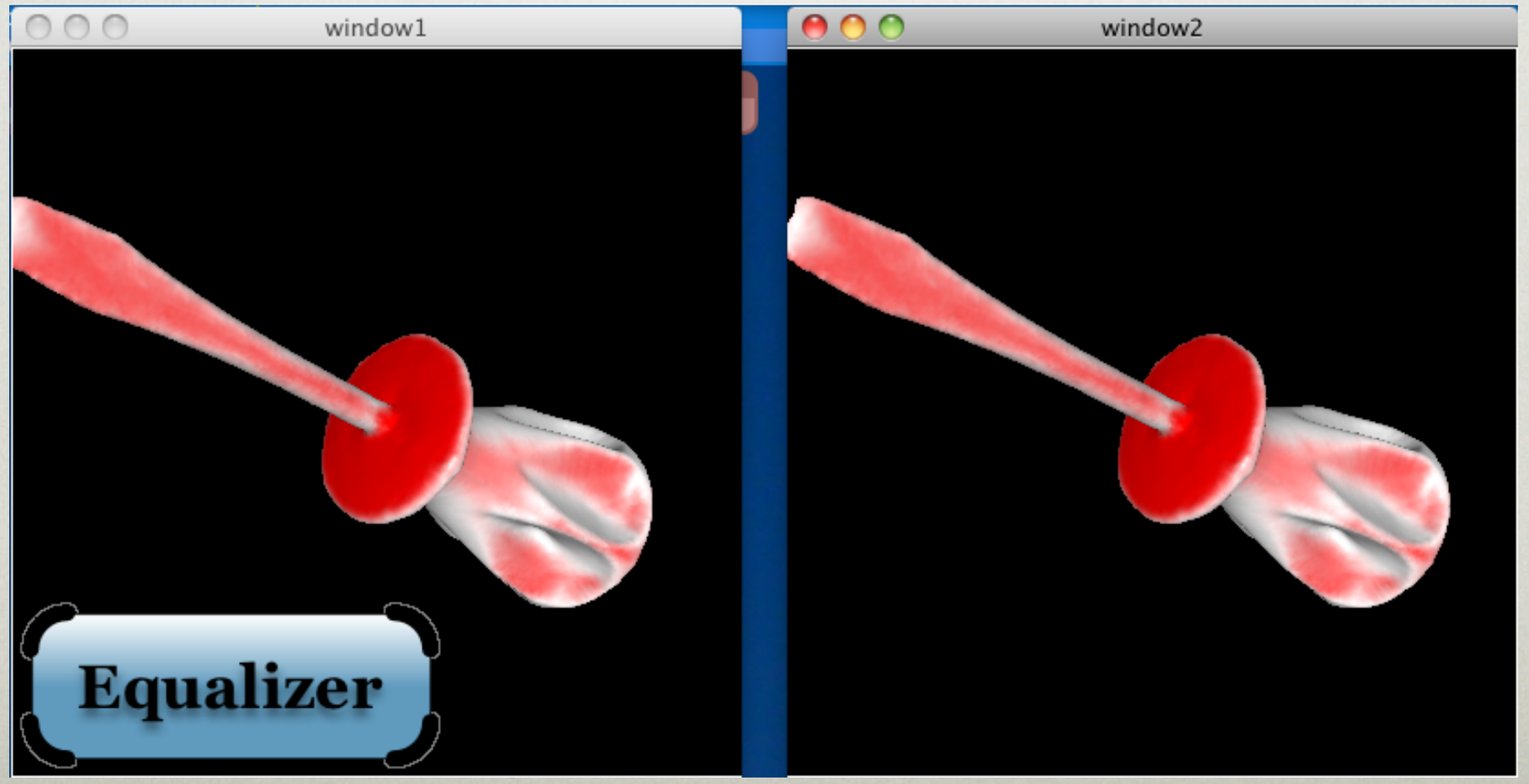
MultiLevel

- Combined 2D/DB compound
- Address different bottleneck
- Any other combination possible



Layout HMD

- Head-Mounted Display
- Different frustum calculation when moving observer



Next Steps

- Cluster example configurations are named *n*-node.*.eqc
  - Password-less ssh setup needed
    - Change hostnames to reflect your setup
    - ConfigTool creates some configurations
- Active stereo requires stereo visuals
- Read User Guide