Equalizer

Quickstart and Demonstration Guide

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

Building Equalizer

- See also: http://www.youtube.com/Eyescale
- Linux, Mac OS X:

  ```
  cd src; make
  ```

  - set library path as printed by make
- Windows:
  - Build Solution `src/VS2005/Equalizer.sln`

Running the Server

- Linux / Mac OS X:

```
cd src/build/[Linux|Darwin]/bin
./eqServer [config]
```

- Windows:
  - run: Debug ‘Equalizer Server’ project
  - **OR**: `build\VS2005\win32\debug\eqServer`

Running the Example Application

- Linux:

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

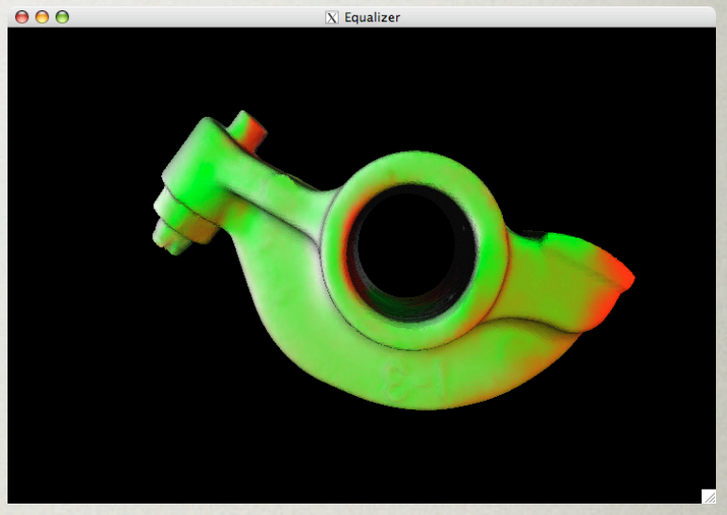
- Mac OS X:

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

- Windows:
  - debug ‘eqPly Example’
  - **OR**: `build\VS2005\win32\debug\eqPly.exe`

Running the Example Application

- eqPly runs now with default config
  - one window, one pipe thread, one process
- Left mouse button rotates
- Middle mouse button zooms
- Right mouse button moves
- Exit by pressing <Esc>, all three mouse buttons or using window close button



Exploring Equalizer

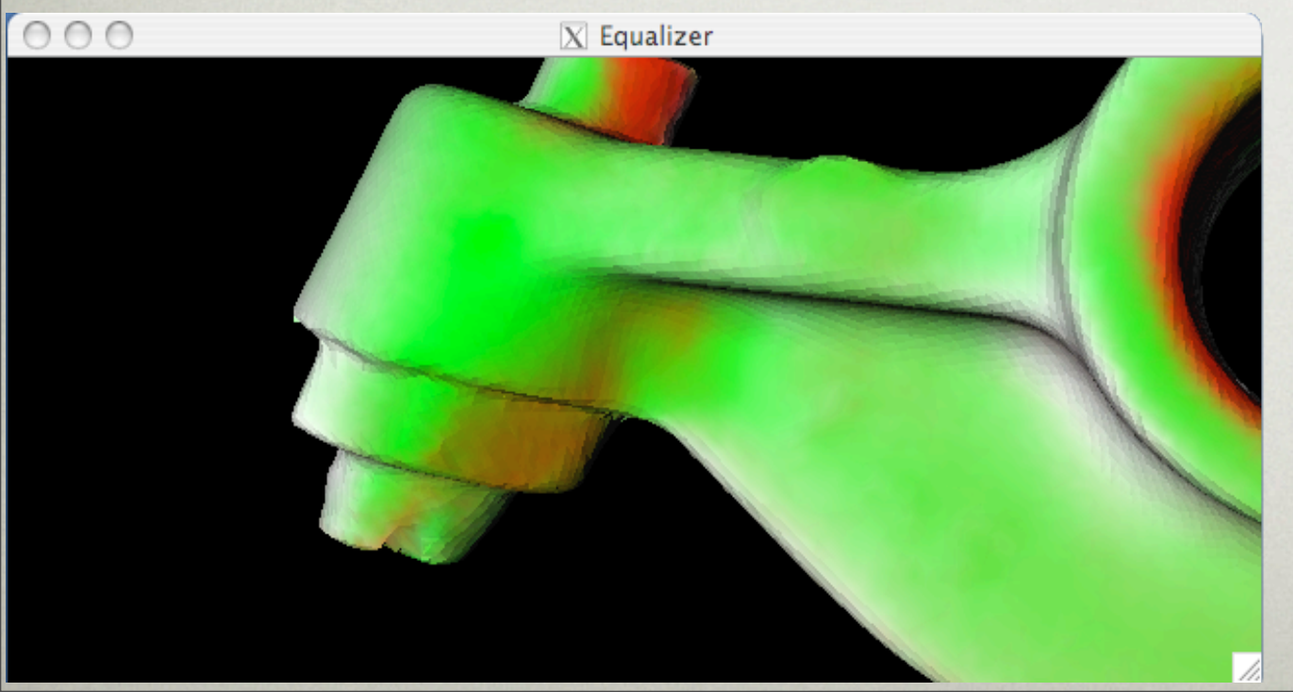
- To use a different config:
  - exit eqPly; stop server
  - start server with new config:

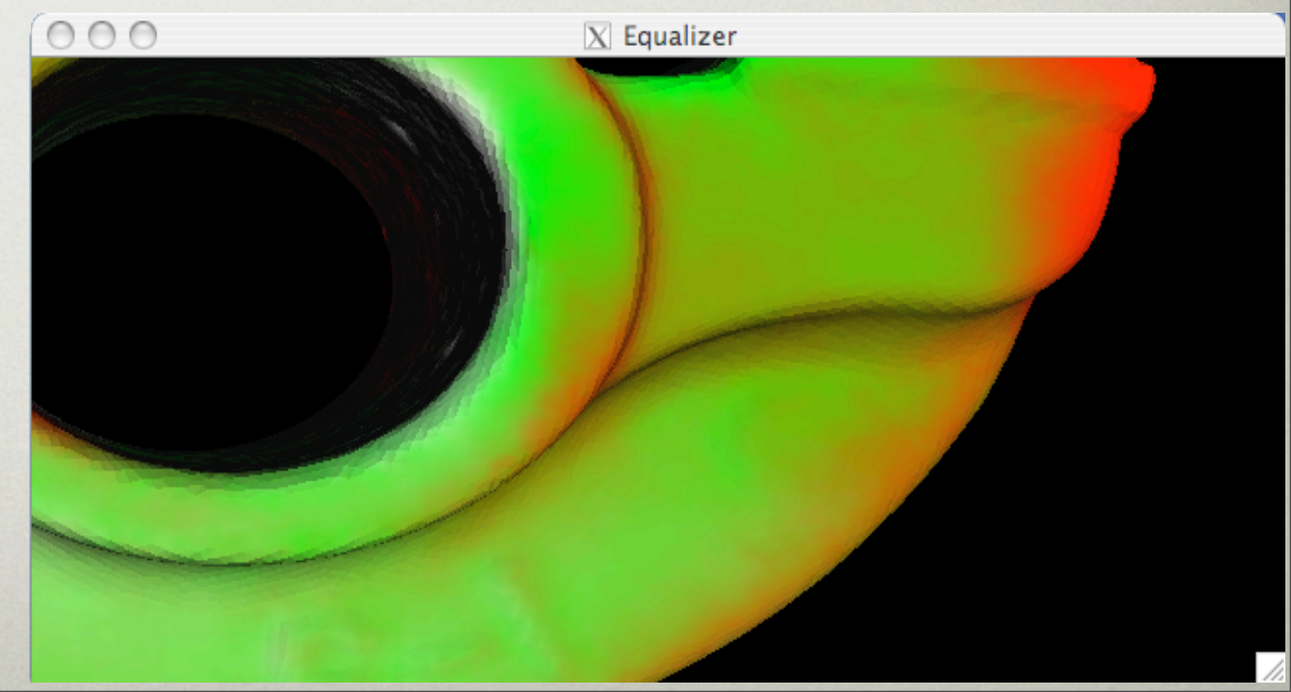
```
./eqServer <examples>/configs/2-window.eqc
```

  - run eqPly again
- Load model with '--model <name>'
  - Sample Models at www.cyberware.com

2-window

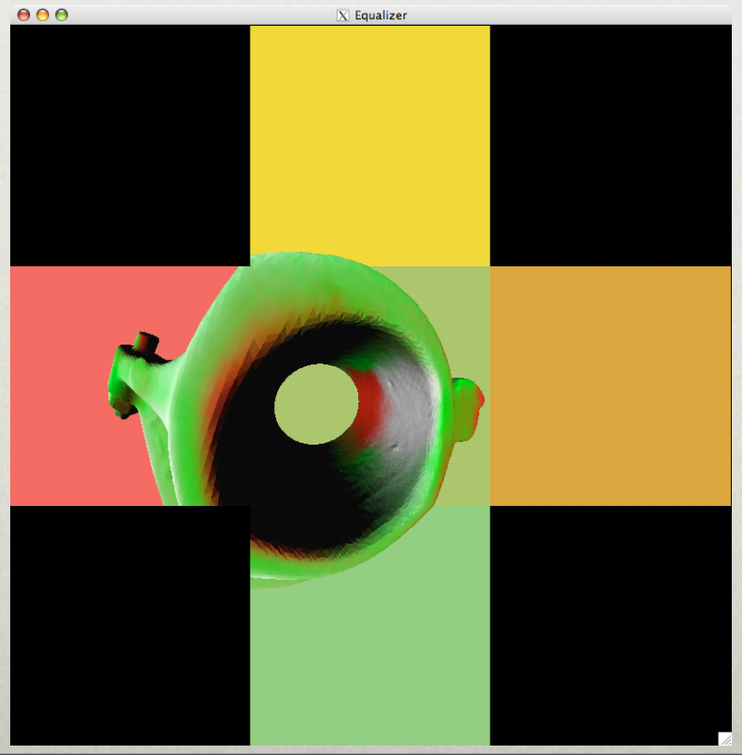
- Two windows, one pipe thread
- Compound wall descriptions produce side-by side image





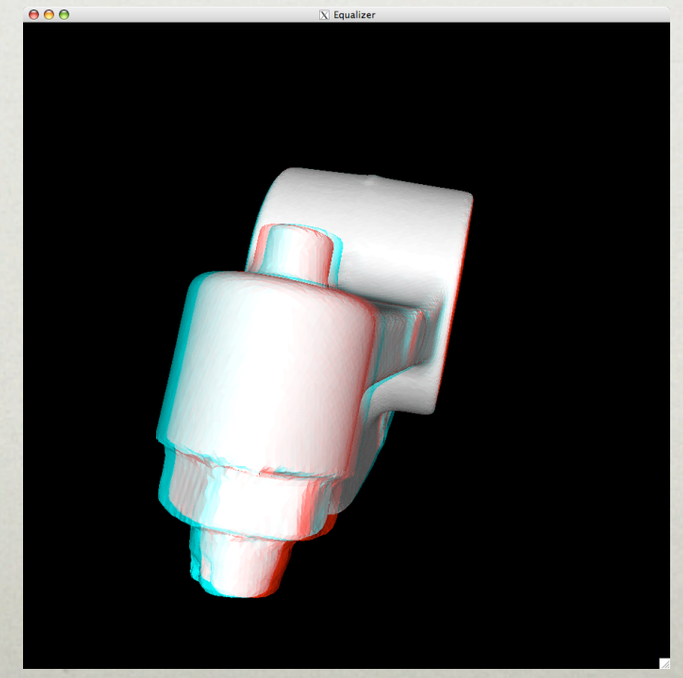
2-window

- Set EQ_TAINT_CHANNELS to get channel background colors
- One window, five channels
- Simulate a CAVE™ on a single PC



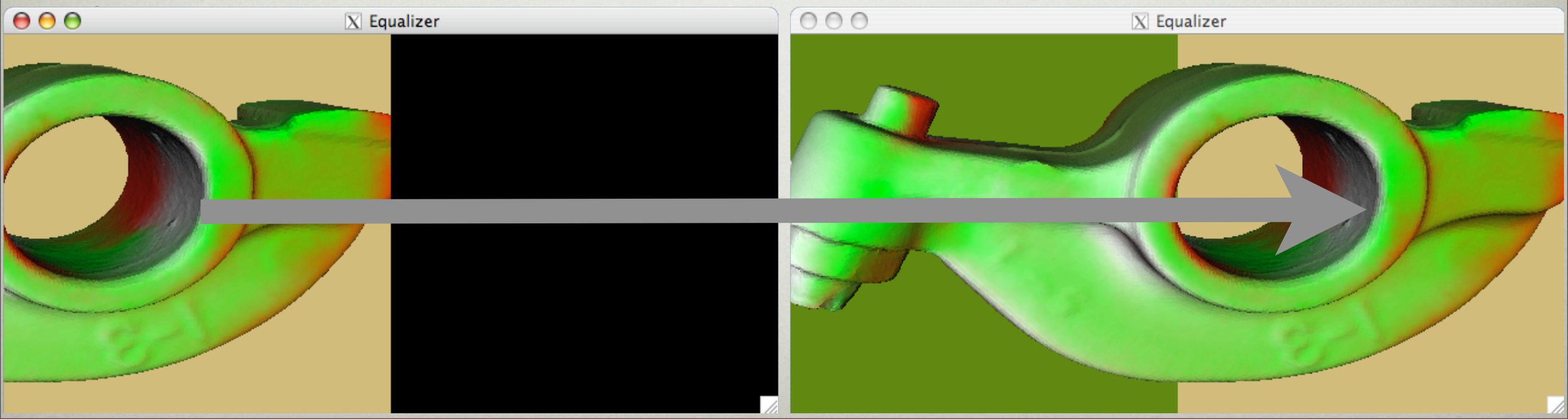
1-pipe.stereo.anaglyph

- Start eqPly with option -b
- Use anaglyphic (colored) glasses
- Two sequential eye passes
- Support for active (quad-buffer) stereo



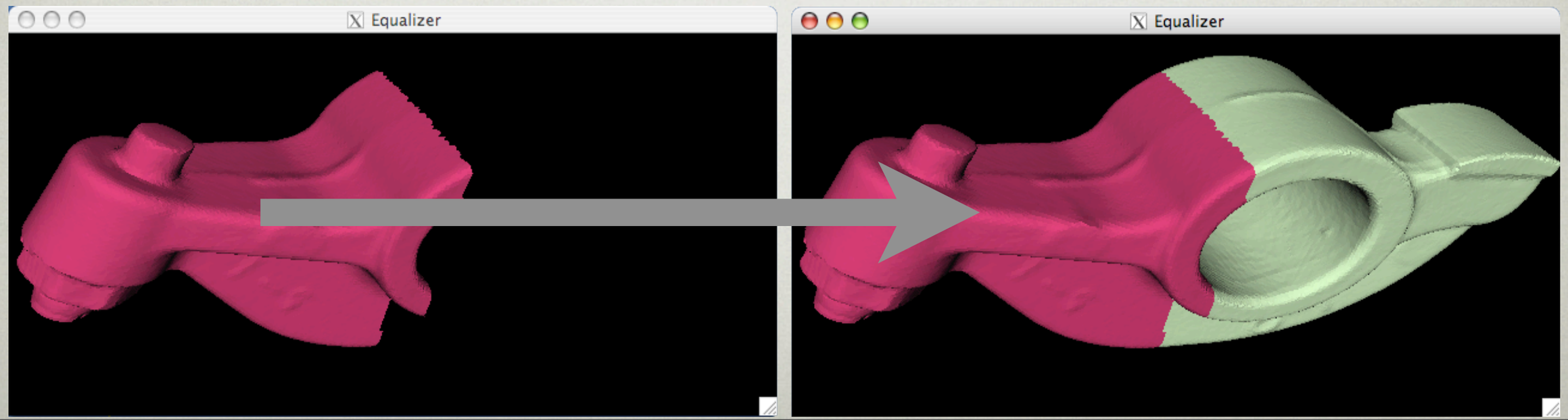
2-window.2D

- Left window renders half of the viewport for right window
- For deployment, windows are on separate pipes (GPUs) for scalability



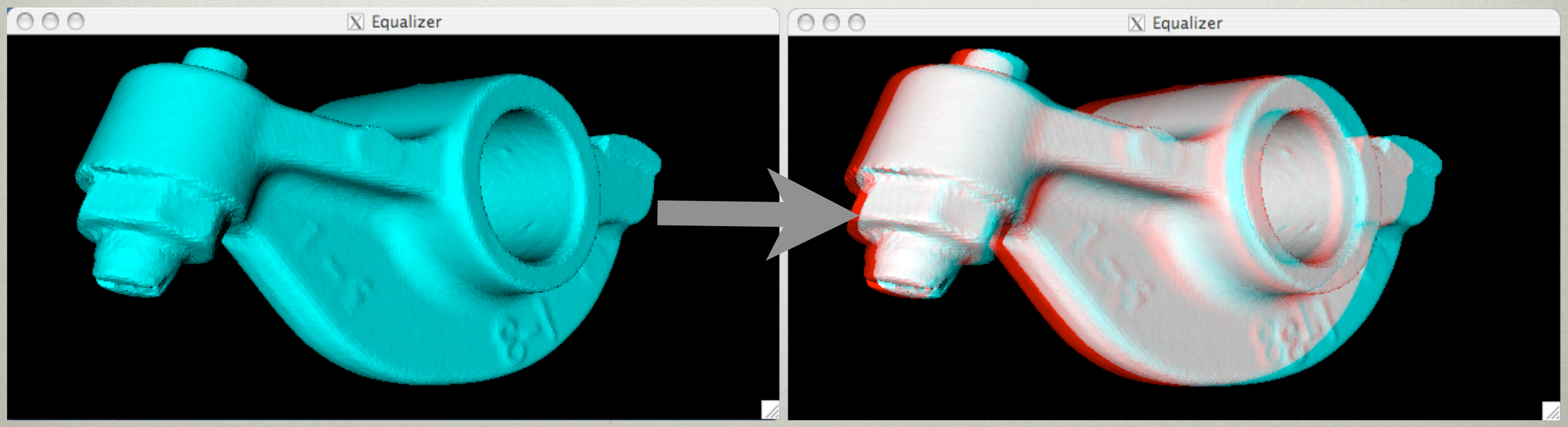
2-window.DB

- Left window renders part of the database for the right window
- Coloring is implemented in eqPly
- Data is combined using Z-Buffer information



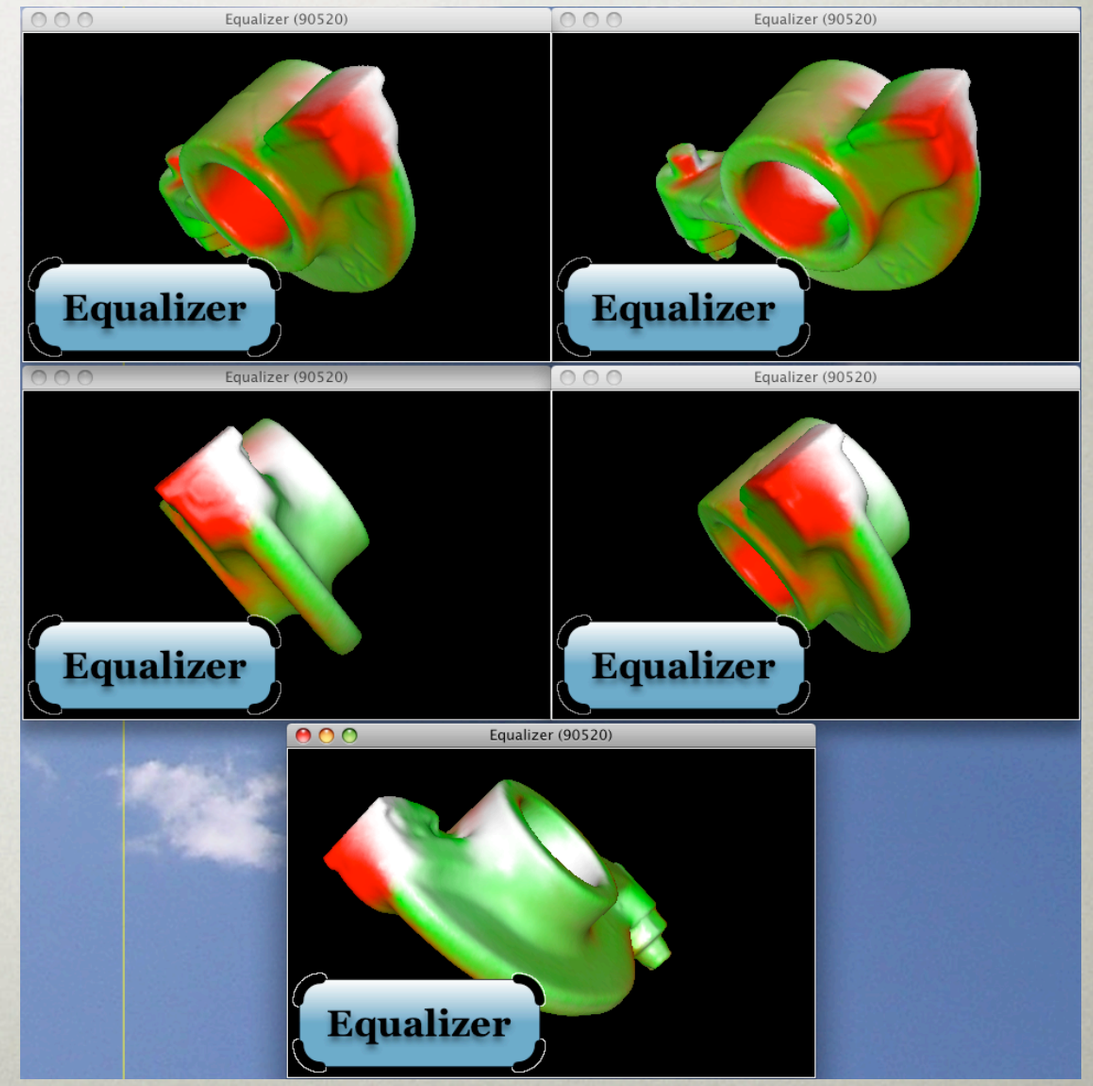
2-window.EYE.anaglyph

- Left window renders right eye
- Right window renders left eye
- Very good scalability on two pipes
- Also works for active stereo



5-window.DPlex

- Sources render every fourth frame
- Destination smoothens framerate
- Quasi-linear scalability
- Increased latency

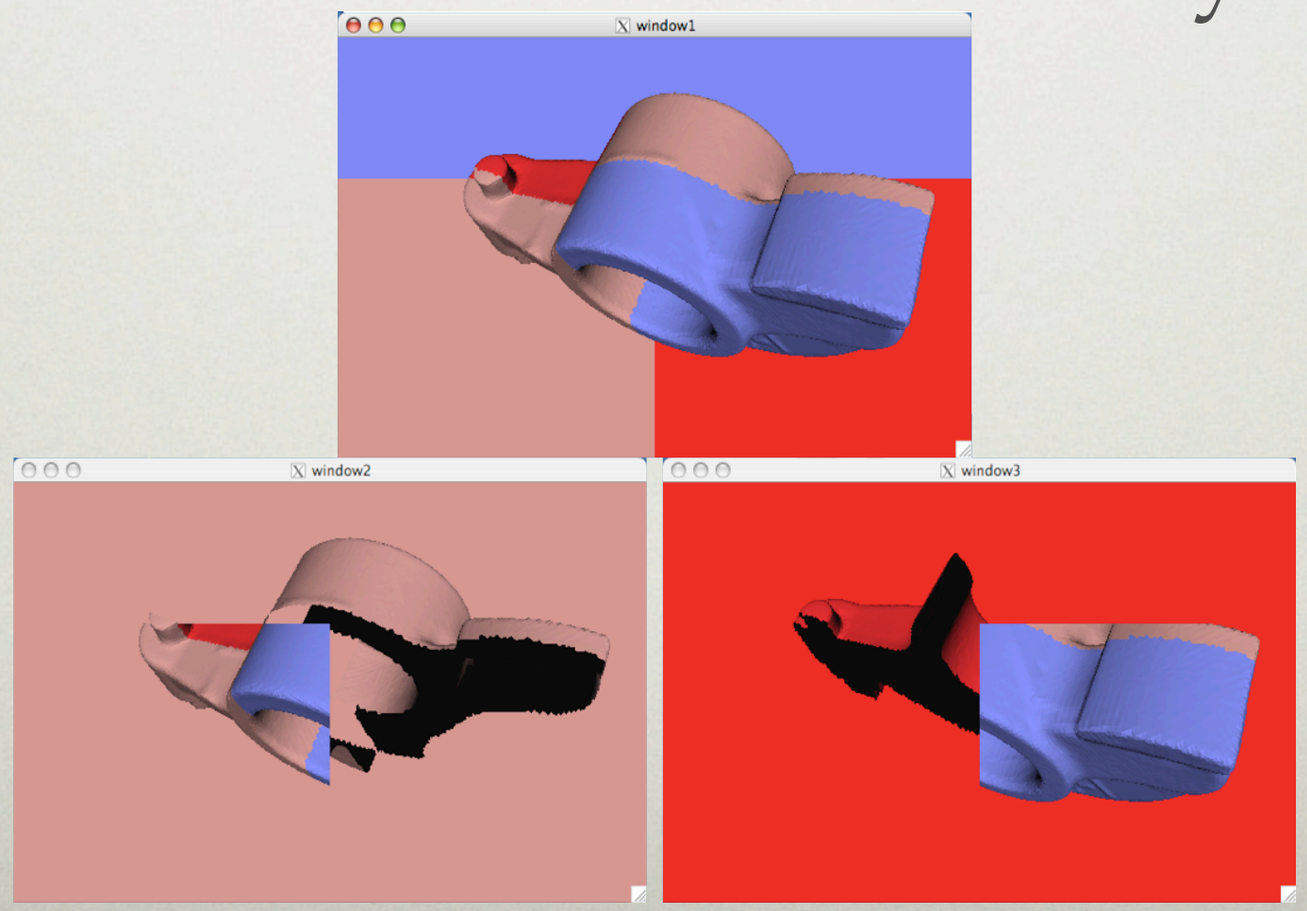


2-window.PIXEL

- Left window renders even lines
- Right window renders odd lines
- Very good scalability for fill-limited applications, e.g., raytracing

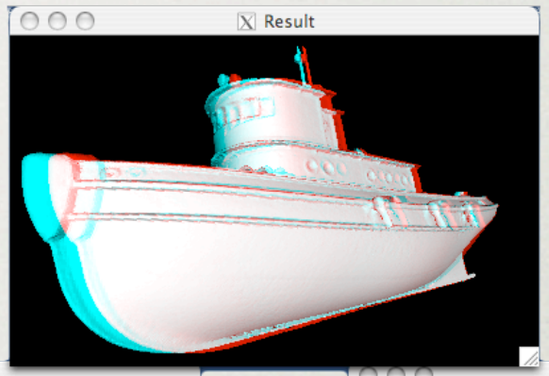
3-window.DB.ds

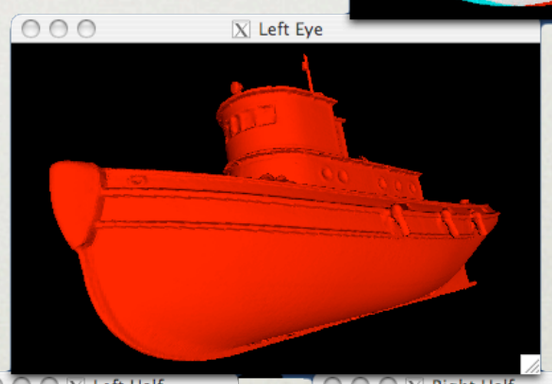
- Parallel compositing (direct send)
- Each channel renders and composites
- See 4-window.DB.bs for binary swap

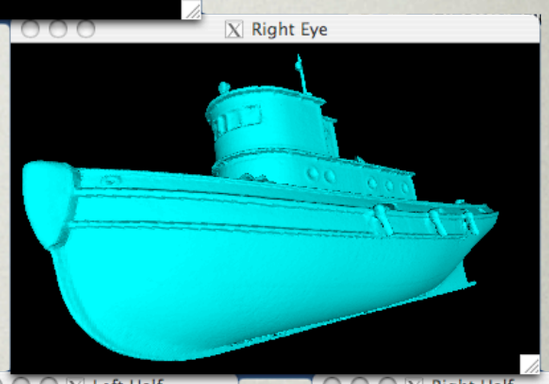


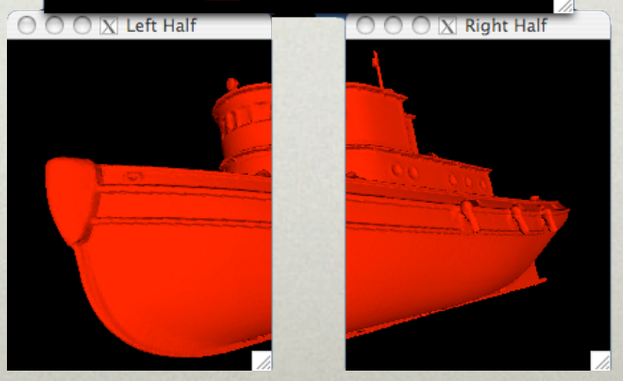
7-window.EYE.2D

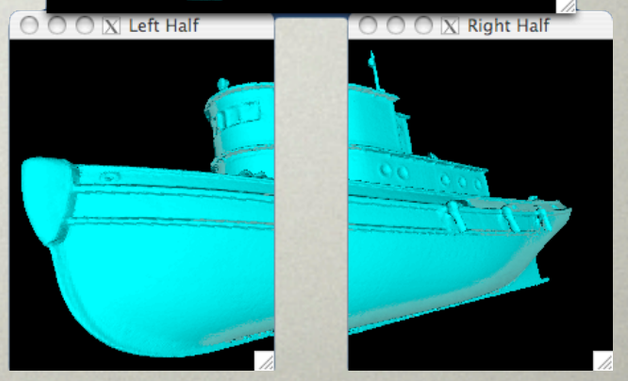
- Multilevel configuration
- Combine modes for optimal performance
- Deployment on four pipes











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 configuration file specification