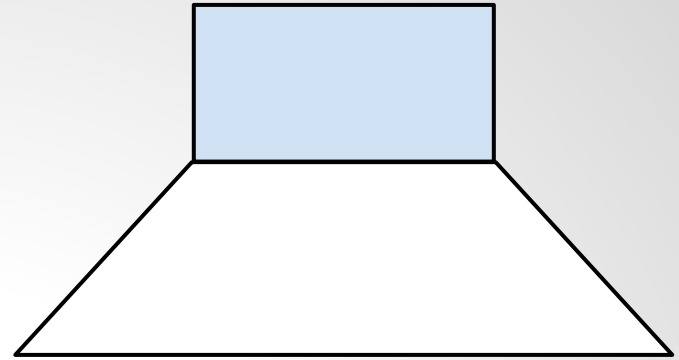


Moving Windows

Milestone 1

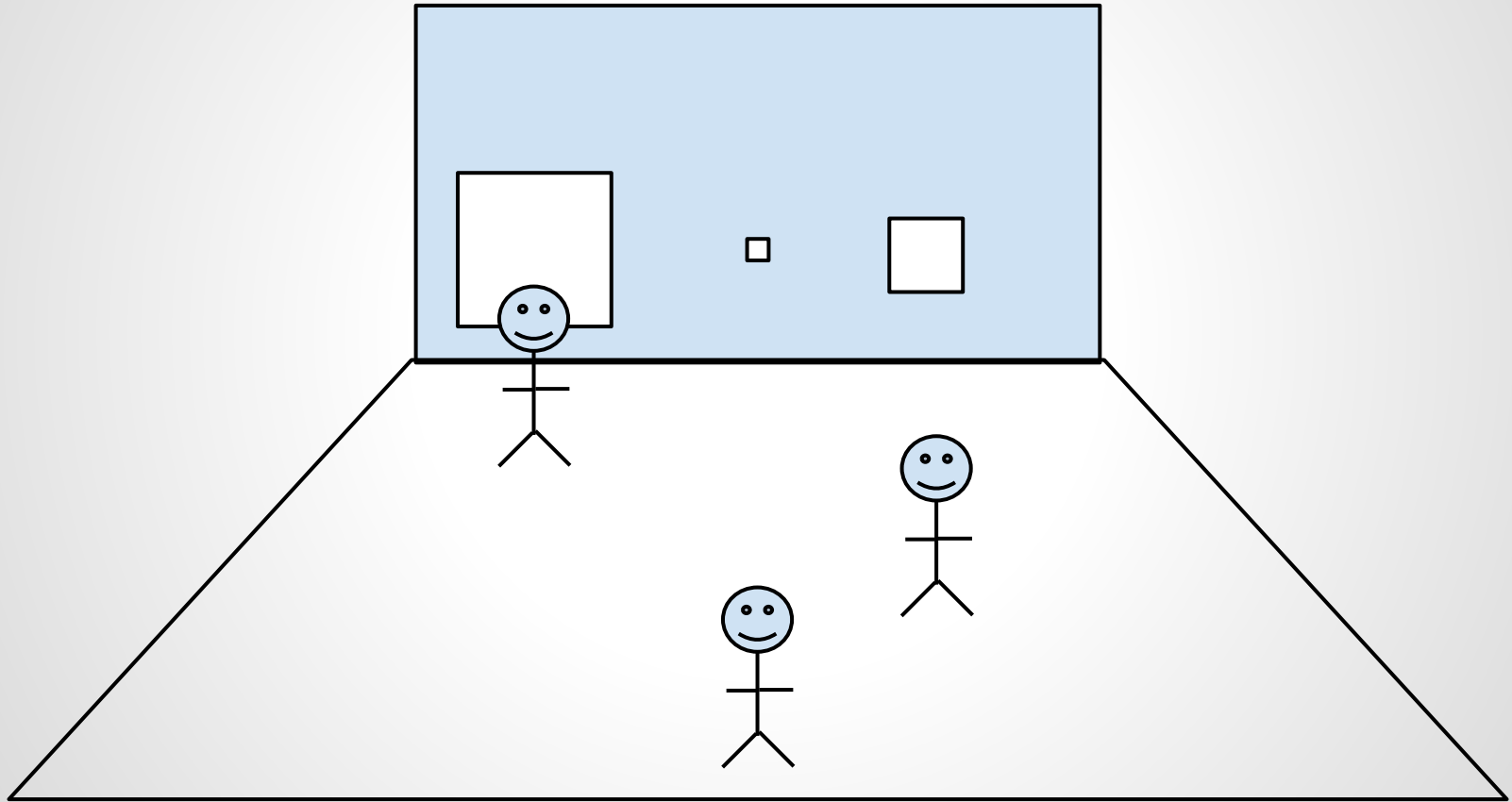
30.10.2012

Concept



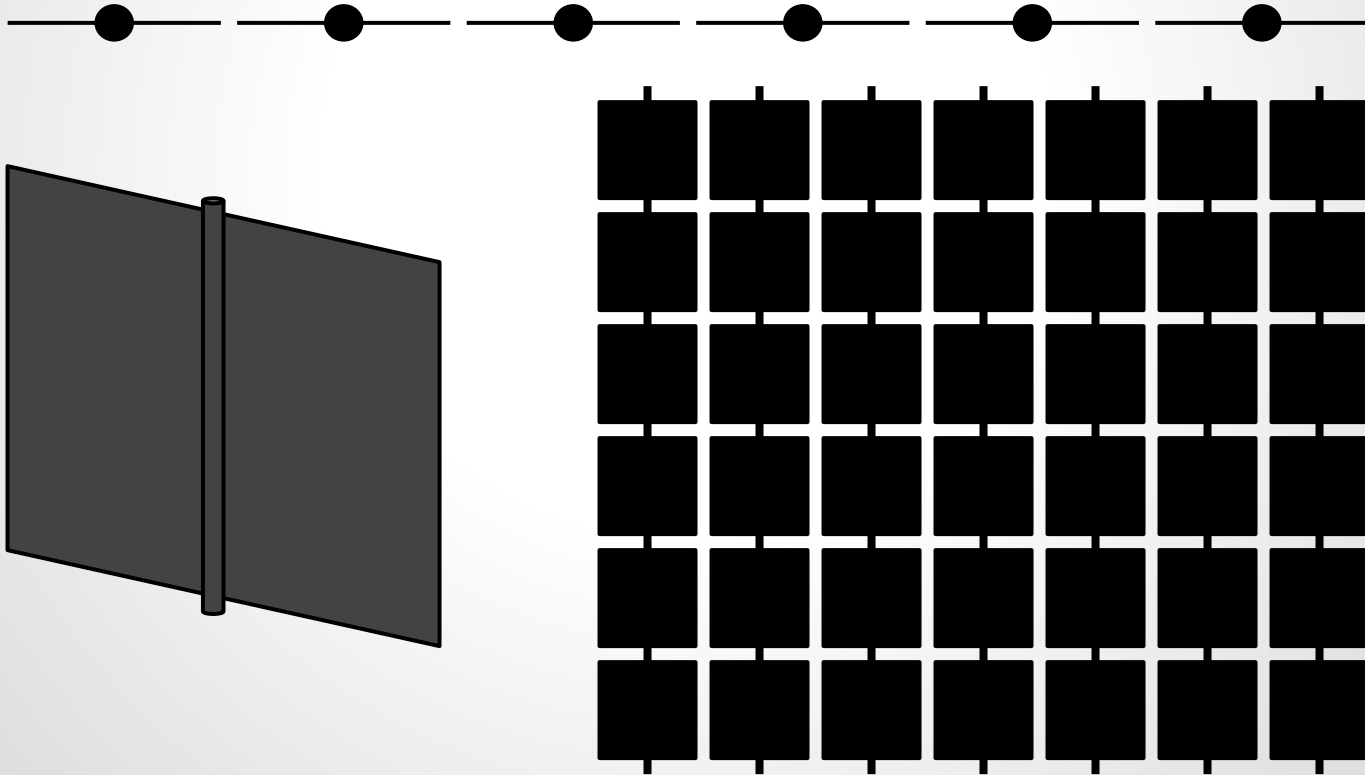
- Build a solid wall with physical pixels that can be opened or flipped to reveal the background.
- When people get within a certain distance of it, a window forms in front of them.
- The window should be centered on the person's head, i.e. same XY position on the wall plane.
- The window grows inversely proportional to the distance of person, and follows him/her around space.

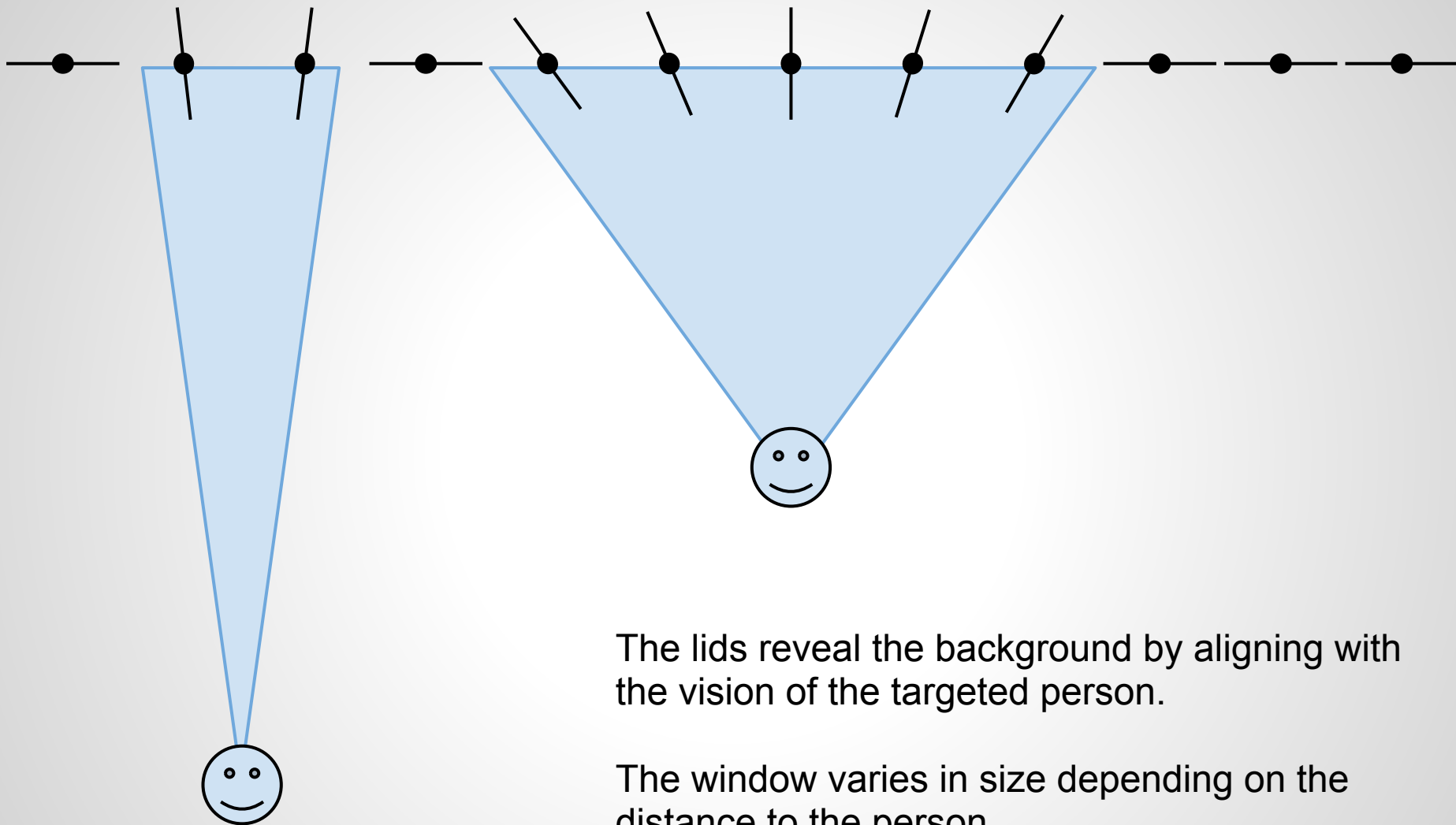
Note: actual product may differ.



Solution 1:

Mechanical solution, hinge + lid system.





The lids reveal the background by aligning with the vision of the targeted person.

The window varies in size depending on the distance to the person.

Drawbacks / Problems:

- Scaling: 1 motor per pixel
- Single point of view per window, superposition problem
- Analog world: active-inactive state of pixels (going from X° to 0° in one time step)
- Response time of mechanical system

Implementation

- Processing simulation
 - on screen 3D pixel grid
- Kinect for head tracking in 3D space
 - simple-openNI library: <http://code.google.com/p/simple-openni/>
- 3D pixel prototype (hardware)
 - Arduino + servo motor

Demo

Solution 2:

Smart Glass:

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

Electrochromic film/glass allows for multi-viewing angles.

Simpler problem, but less interesting from an artistic point of view.