Glasses Technology Updates

- for Everyone

- just for Old People

Inactive Sunglasses are Lame

- SO MUCH MANUAL EFFORT

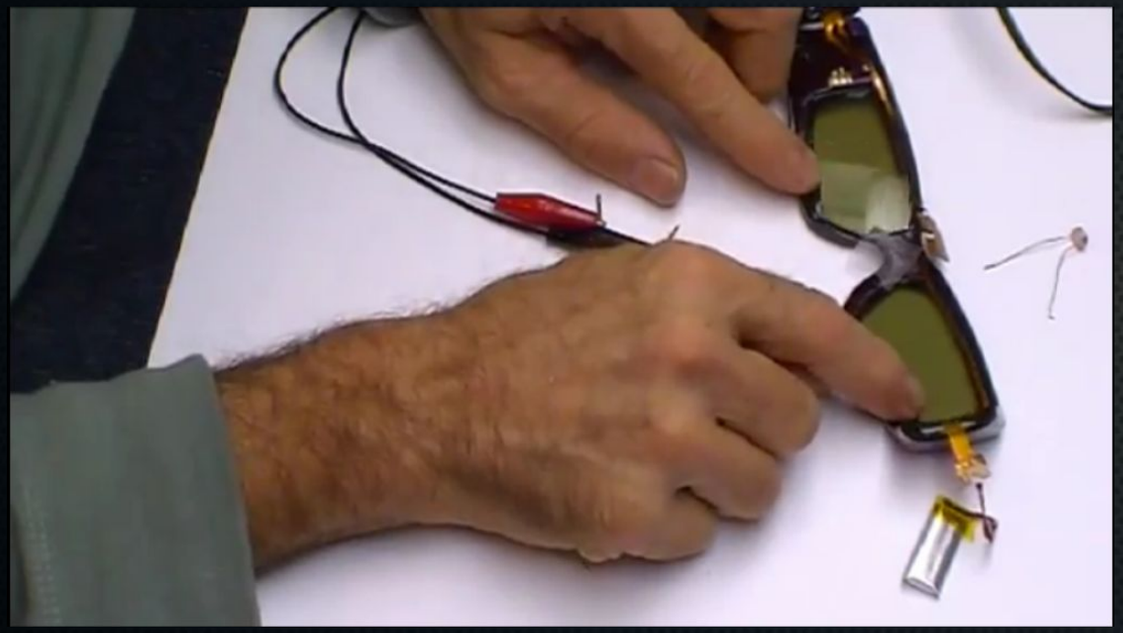
Photochromic Lenses

- Old lenses were slow
  - Long time to go dark and clear
- New lenses are faster
  - Quick to darken; still slow to clear
- Fast != instant

Enter: 3D Home Theater Technology

- 120 times per second, the liquid crystal goes dark and clear(ish)
- 120Hz is pretty nice response time

Hobbyist: 3D HT Glasses → Sunglasses



- Uses a photo-sensor to force the liquid crystal to darken or clear
  - Near-instantaneous
  - Probably dangerous

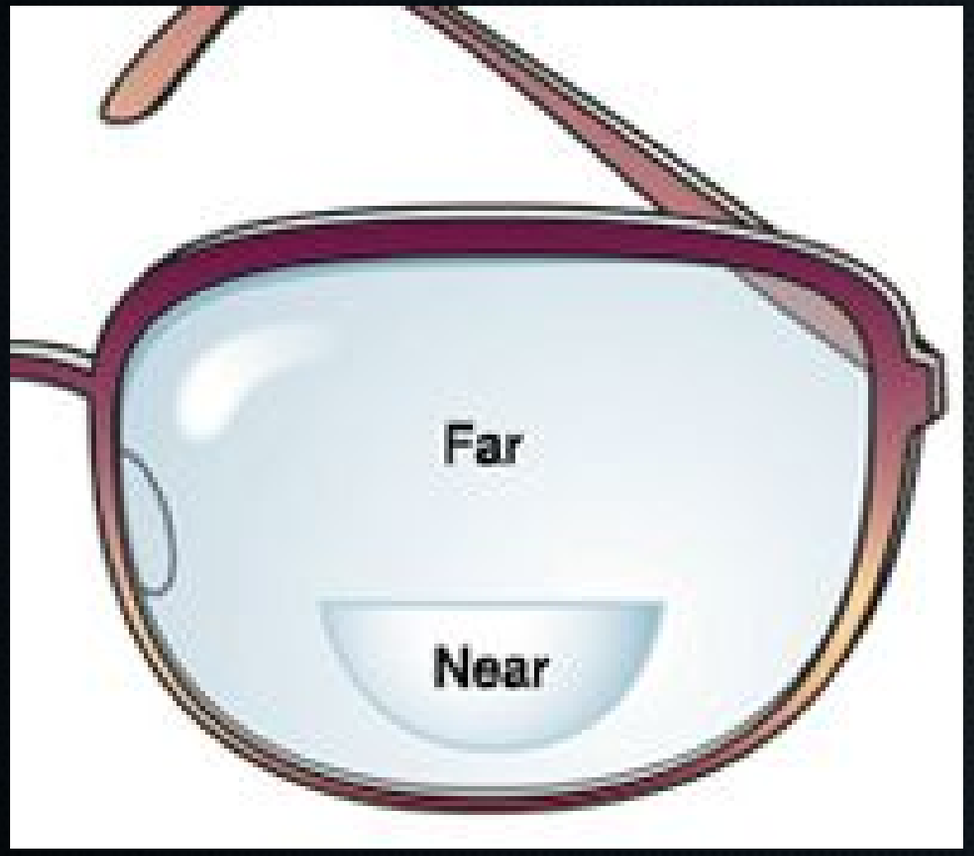
Consumer: Liquid Crystal Sunglasses

- These generic ones have several stages of darkness, controlled by a button.
  - $20 from Amazon
- No light sensor :(

What if you get old?

- As you age, your lens hardens
  - By default, your eyes focus on distance
  - Flexing your lenses = close vision
  - A hardened lens means less ability to focus near
- You could take distance glasses off when not needed
- You could get bifocals

Bifocals Suck



- Where you look determines how you focus on things

Why not Just Switch Between Glasses?

A Better Way to Switch

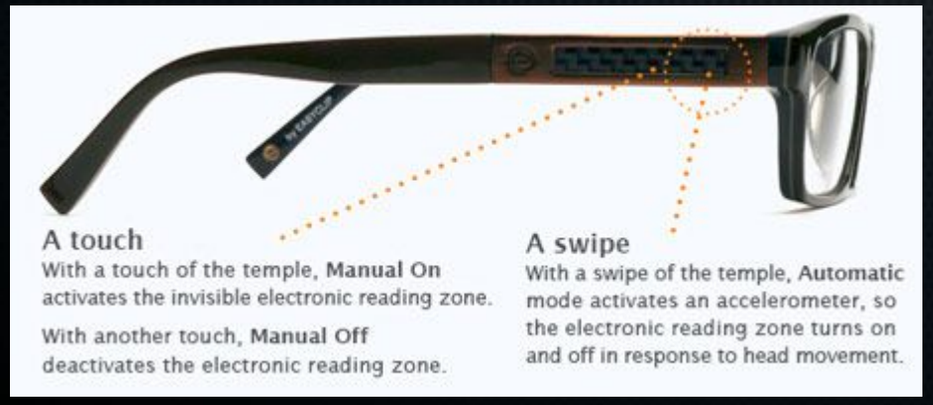
- SuperFocus (brand name) uses liquid lens technology
  - Slider switches between distance and close mode
  - Terribly expensive
  - Technology limits lens shape to circle

But That's Mechanical!

- How about switching electronically?

PixelOptics emPower

- Uses embedded liquid crystal to bend light for optional reading mode
- ABSURDLY expensive



What I Want

- Light-driven instant dark/clear lens transition
- Cameras and distance sensors adjust lenses to help see what I'm looking at

References

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