

# Disappearing Act

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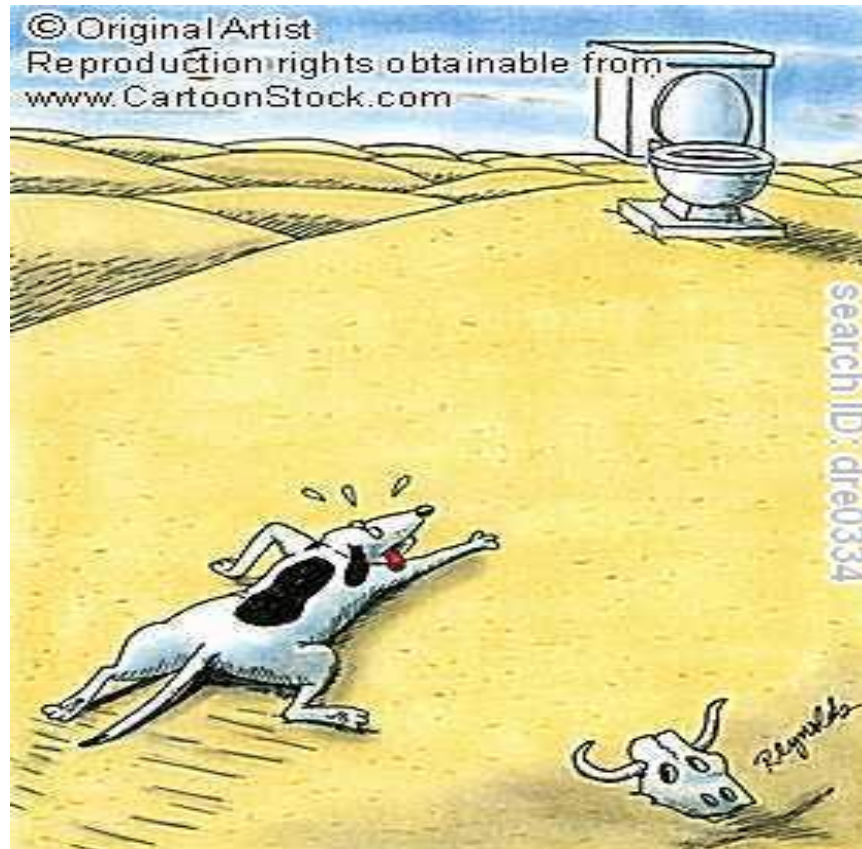
# The Technology

For this final project I have chosen the  
technology of...

**THE INVISIBILITY CLOAK**

# The Invisibility Cloak

This technology uses the phenomenon of  
**MIRAGES**



# Mirages

This unusual experience can trick your brain into seeing objects that aren't really there.

Like in deserts or on hot roads.

# Why Do They Happen?

Mirages happen when a big change in temperature over a small distance bends light rays so they're sent towards the eye rather than bouncing off the surface.

So if you see a pool of blue water in the middle of the desert it's just the blue sky being redirected from the warm ground and sent directly into your eye.

Your brain then swaps this mad image out for something more sensible like a pool of water.



# Nanotubes

With this, the researchers at University of Texas needed to find a material that has an exceptional ability to conduct heat and quickly transfer it to surrounding areas to mimic the light-distorting temperature gradients of the desert. That material they found were **sheets of carbon nanotubes**

# What Are Nanotubes?

These nanotubes are one-molecule-thick sheets of carbon wrapped up into a cylindrical tube which have the density of air but the strength of steel.

They're also excellent conductors, making them an ideal material to exploit the "mirage effect"



# How It Works?

Through electrical stimulation, the transparent sheet of highly aligned nanotubes can be quickly heated to high temperatures.

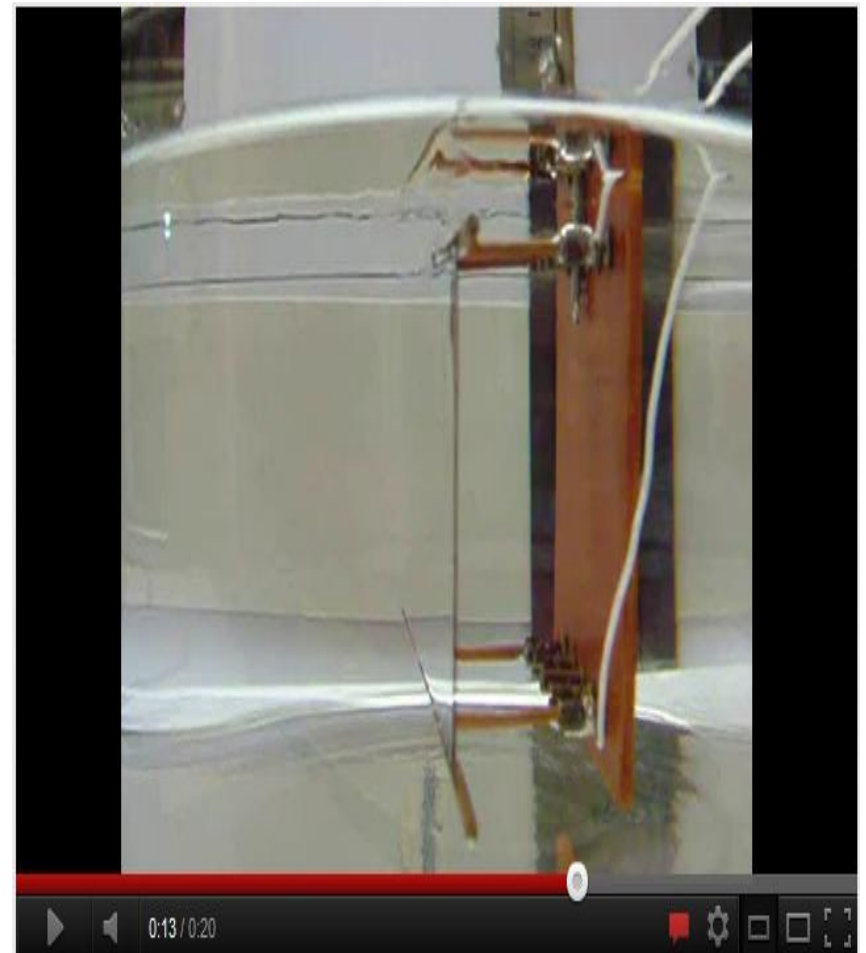
By transferring that heat to its surrounding areas, a steep temperature gradient is generated, which causes the light rays to bend away from the object concealed behind the device.

Therefore, the object appears invisible.

It can hide objects from view, works best underwater and even has a near-instant on/off switch.

# Video

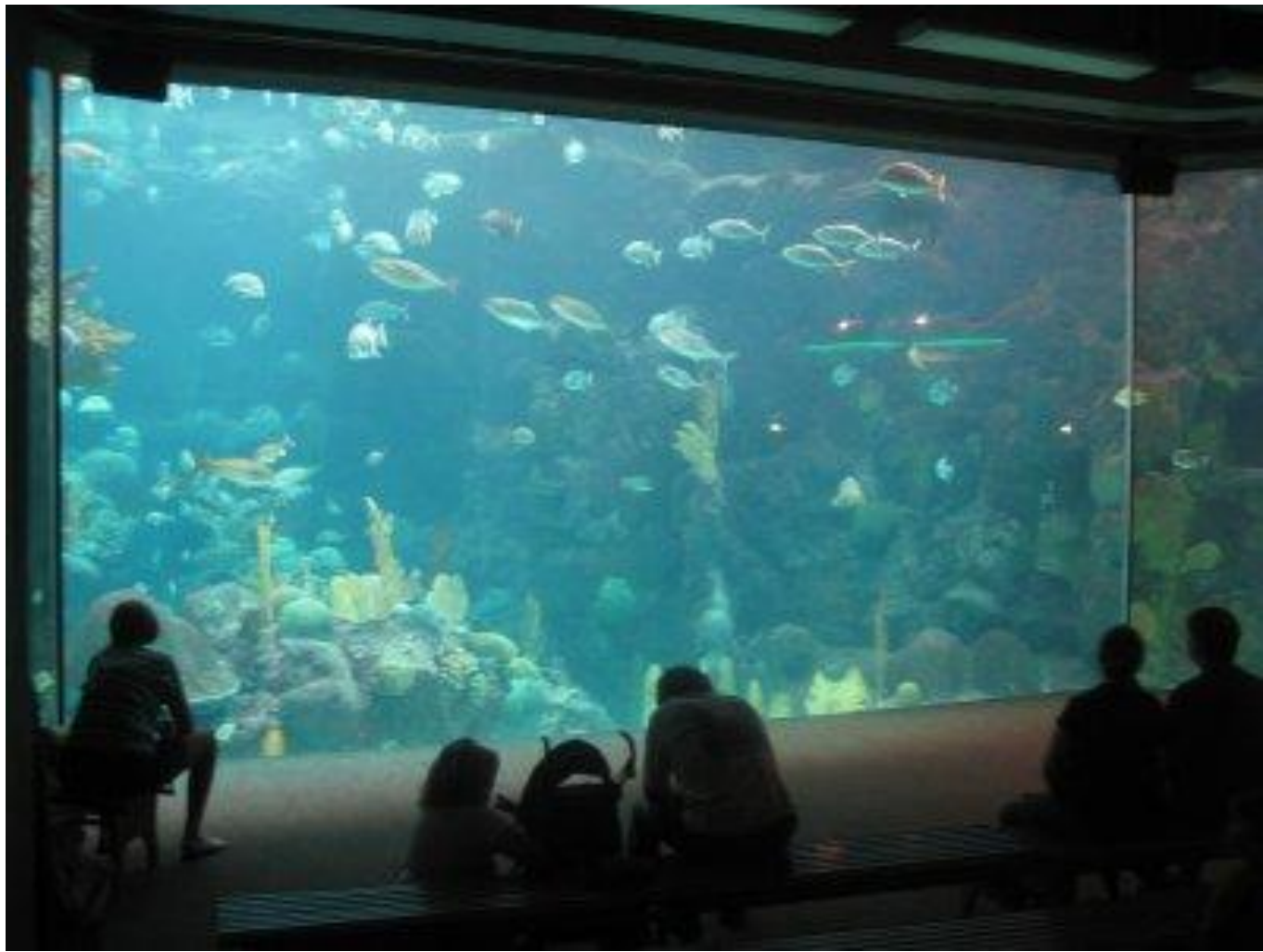
[http://www.youtube.com/watch?feature=player\\_embedded&v=3YO4TTpYg7g](http://www.youtube.com/watch?feature=player_embedded&v=3YO4TTpYg7g)



# Science to Art

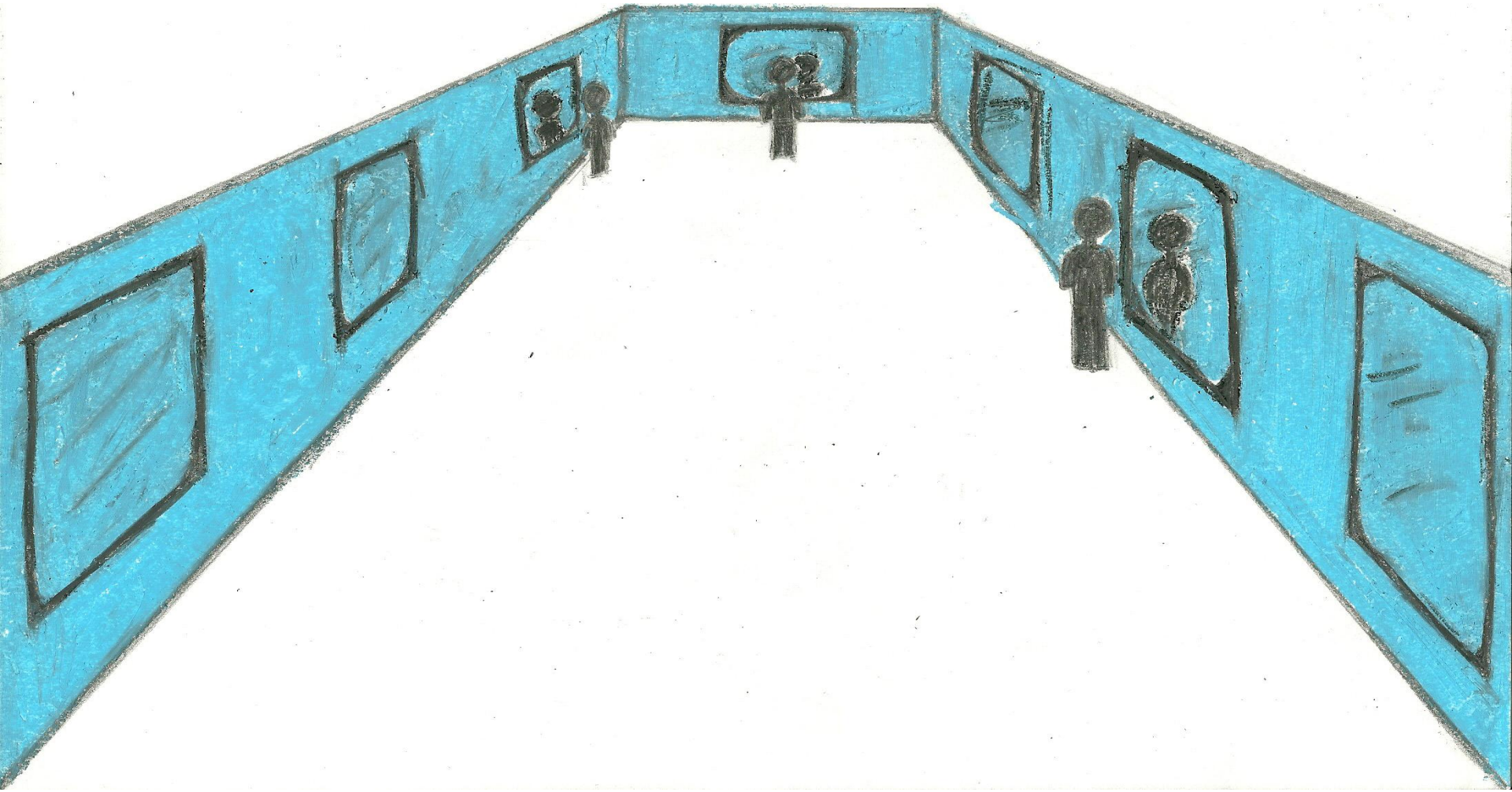
In order to make this technology into art I would first start off by having a gallery space in which all the walls were like floor to ceiling aquariums. (minus the fish)

Since this technology works best in water, this would be the best choice to show this in.



In these “aquariums” I would have about 2-4 full length mirrors spread out along the wall.  
Here people can check themselves out or do whatever they like.

# Gallery Space



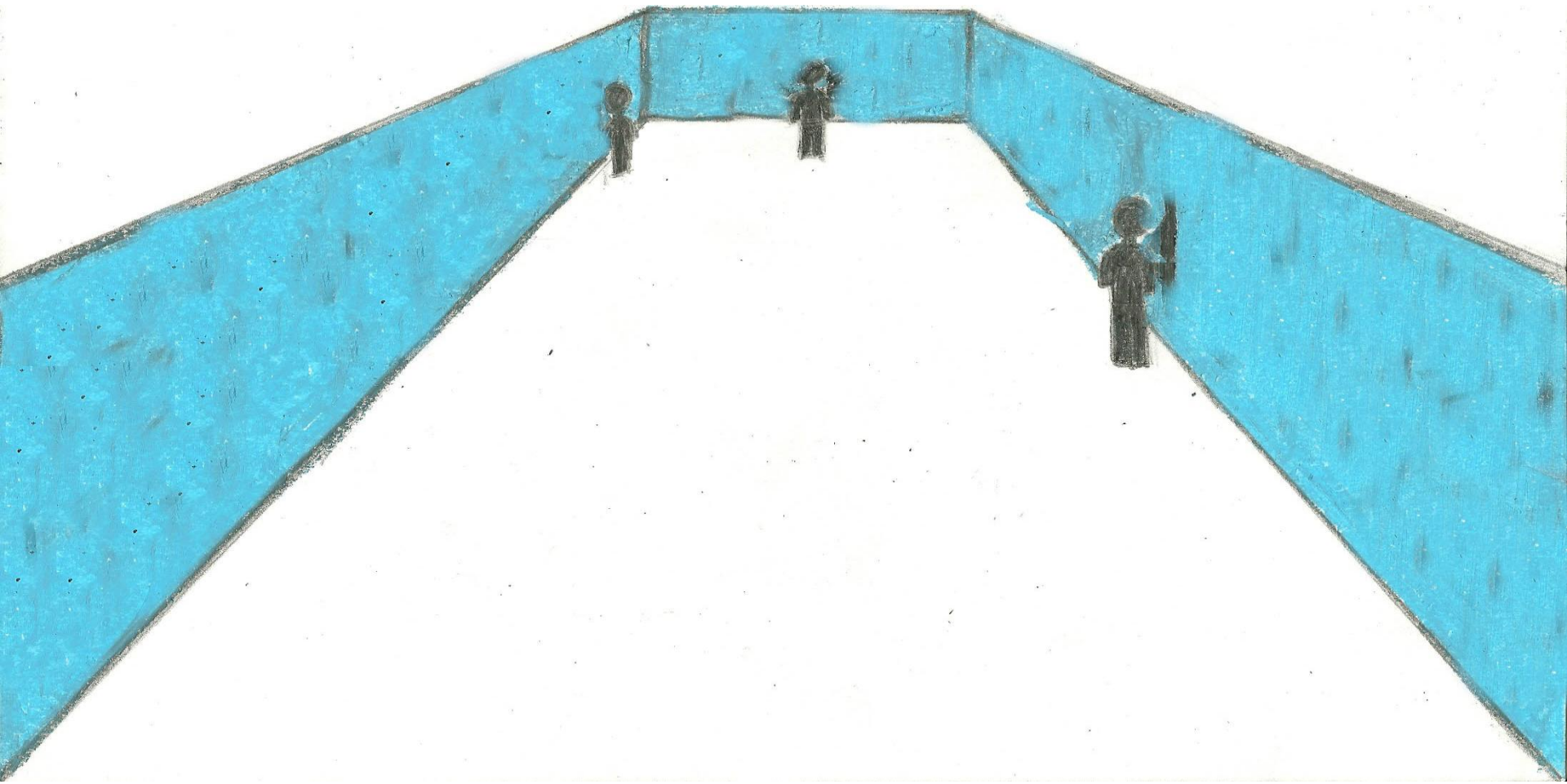
# However...

What the don't know is that these mirrors are all equipped with the sheets of carbon nanotubes.

Therefore, these mirrors are able to “disappear” at any moment.



# Disappearing Mirrors





Viewers would then experience the image of themselves in the mirrors going away and coming back into view

# Conclusion

I feel that this would be an interesting gallery space because the viewer would have no idea when their image could disappear or reappear.

The viewer would also wonder how it was happening, leaving the viewer with a sense of wonder and giving them something “magical” to experience

# Resources

- [http://www.wired.com/dangerroom/2011/10/invisibility-cloak-mirage/?utm\\_source=Contextly&utm\\_medium=RelatedLinks&utm\\_campaign=Previous](http://www.wired.com/dangerroom/2011/10/invisibility-cloak-mirage/?utm_source=Contextly&utm_medium=RelatedLinks&utm_campaign=Previous)
- <http://idealab.talkingpointsmemo.com/2011/10/invisibility-cloak-demonstrated-using-transparent-carbon-nanotube-sheets.php>
- [http://en.wikipedia.org/wiki/Carbon\\_nanotube](http://en.wikipedia.org/wiki/Carbon_nanotube)