

# VR Game Development Introduction

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# VR is not just an Add-on



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# What VR is



# What we seem to want it to be



These just more "real"



# What VR is

Light-hearted or  
gimmicky fun for  
minutes



This took a while

What we seem  
to want it to be

Fully engaging  
human experience  
for hours



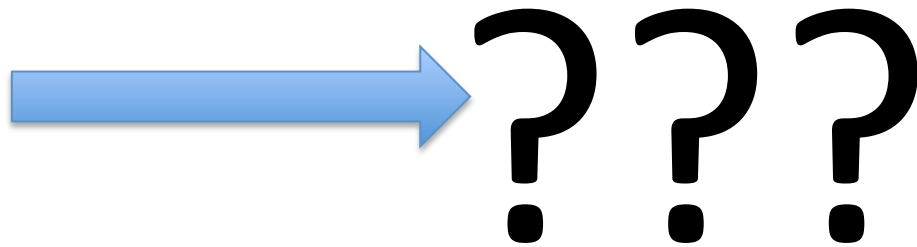
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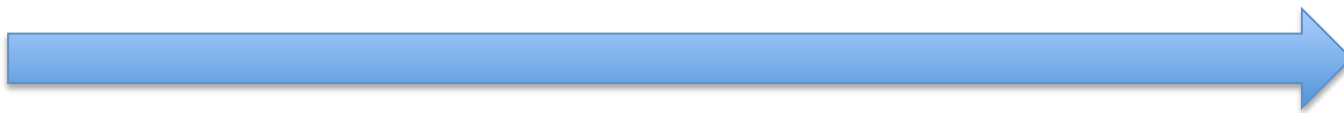
Fully engaging  
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So how can we develop for VR?

# “Lateral Thinking with Withered Technology” —Gunpei Yokoi (inventor of Game Boy)

How to design play with cheap  
well-understood tech?





# Lateral Thinking with **Emerging** Technology

# Initial Goals of Dumpy (2013)

- When the first Rift came out I wanted to make a landmark game on the platform
- Invite everyone to have fun on platform
  - Pick-up-and-play
- Identify, use unique affordances of platform
  - Had to feel like a “Rift” game (not just a port)
  - Hands-free
  - Only input is head rotation
    - Ex. Looking down with wrecking ball hanging from face



# Developing Dumpy

- Once toy was made, development was obvious: **smash lots of cartoon shit...**



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- Hitting lots of cartoon shit **into other shit**

Going ELEPhants!

# Developing Dumpy

- Once toy was made, development was obvious: **smash lots of cartoon shit...**
- Hitting lots of cartoon shit **into other shit**
- Setting up trunk swing mechanic to be useful **in a new way every few seconds**

Going ELEPHANTS!

# Developing Dumpy

- Use varied **distance**. Look and Aim:
  - NEAR: First house is in your way, forcing you to smash it and learn how trunk works
  - NEAR BELOW: Boys running at you
  - NEAR ABOVE : UFOS coming at you
  - MID SIDE: Ice cream truck on building
  - MID AHEAD: House of Bad Boys
  - FAR: Blimp in sky. Distant houses, cars, UFOs

# Developing Dumpy

- Use every **direction**. Look and Aim:
  - STRAIGHT: First bouncing soccer ball
  - SIDE: First Ice Cream Truck
  - UP: Inspiration: Inception bent city scene + Pinball
  - DOWN: Inspiration: Land of Lost desert scene + side hitting debris at cop cars (sort of like baseball)

Going ELEPHANTS!



# Dumpy Art

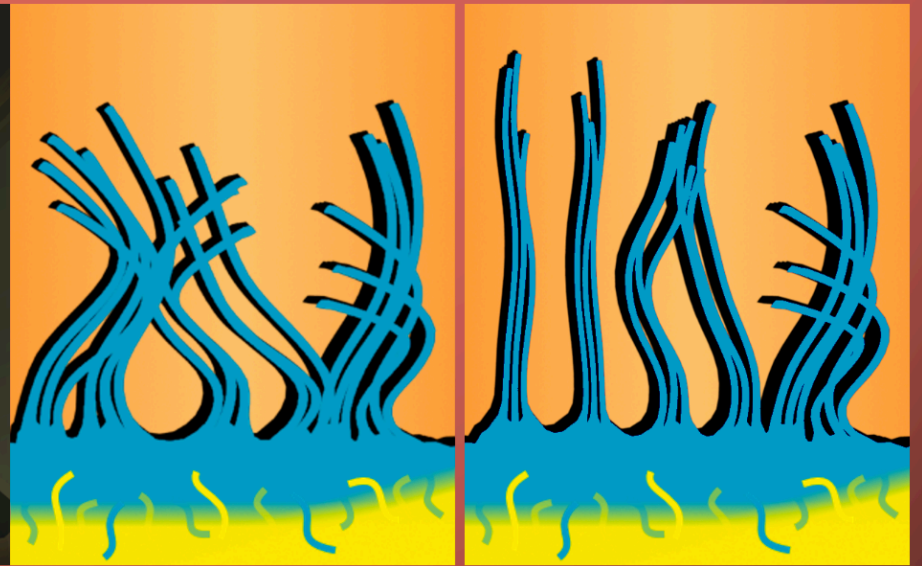
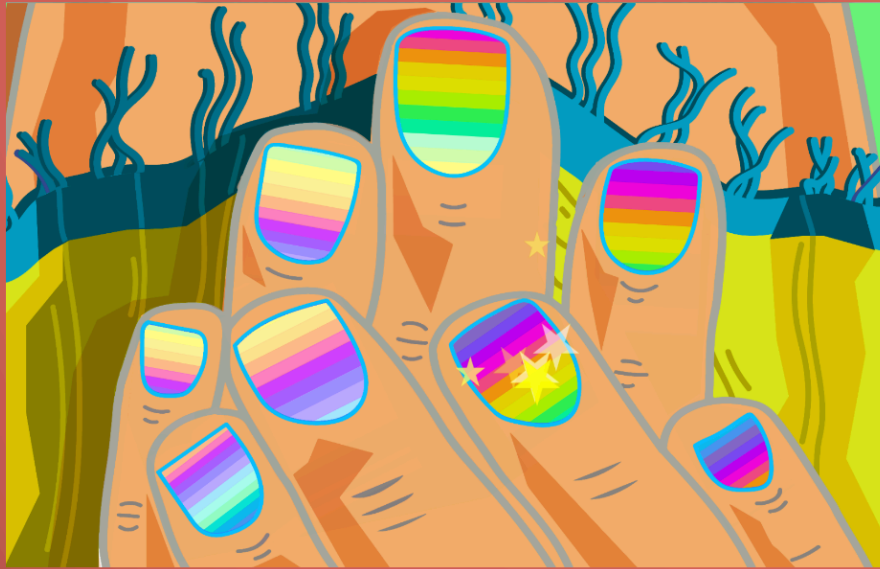
- Fill the world quick! Artists way too slow
- Dumb fun creation process
  - Model, color, rig, animate boy **in 1 minute**
  - Bigger, dumber, and DUMBER, clear and DUMP

Going ELEPHANTS!

# Dumpy Art

- Fill the world quick! Artists way too slow
- Dumb fun creation process
  - Model, color, rig, animate boy **in 1 minute**
  - Bigger, dumber, and DUMBER, clear and DUMP
- Since I wasn't "artist" I could do all the art fast in a really shitty way
  - If I spent more than "no time" on art it looked bad

# A Moment Free from Darkness



# Affordances of Head-mounted Virtual Reality

1. Strong sense of presence in space
2. Strong sense of embodiment in that space
3. **Natural Head Input.**
  - No longer 2D stick or 2D mouse
4. **Natural Hand Input**
  - No longer 2D stick or 2D mouse
5. **Natural Body Input**
  - No longer dead on a chair

# Project #1

Review projects on website.

# Project #1

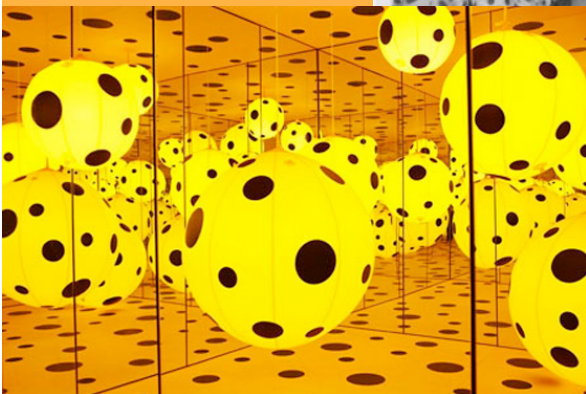
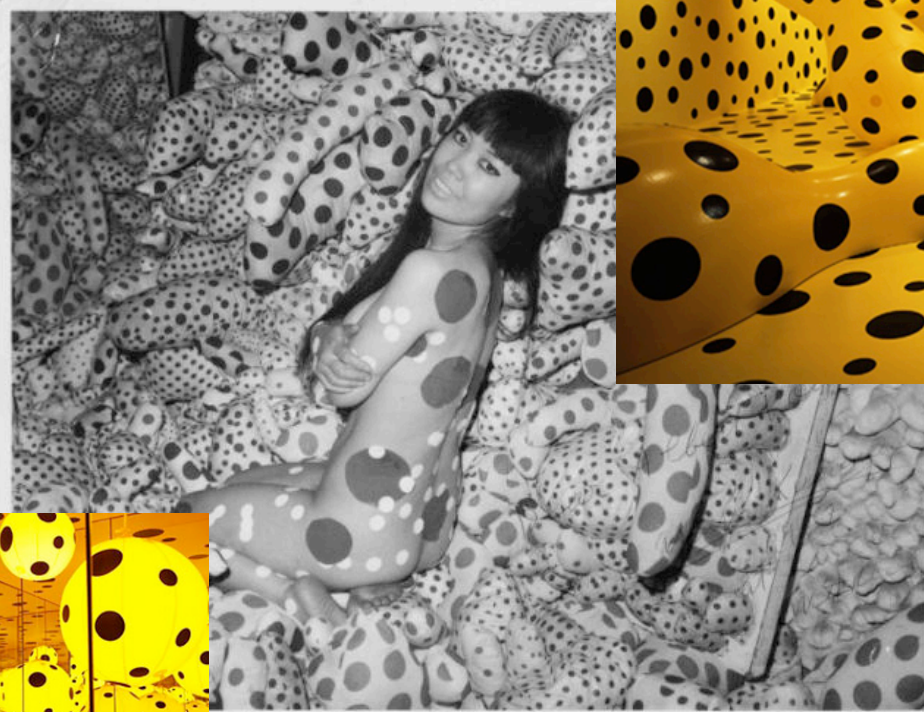
## Fantastic Non-human VR Toy

1. player is in a **strange place**
2. with an implied **fantastic body**
3. doing **fun stuff**

# Strange Places

- Yayoi Kusama
- Richard Serra
- Killing Fields
- Củ Chi tunnels
- The Holocaust History Museum - Yad Vashem
- Dr. Strange by Steve Ditko

# Yayoi Kusama





# Richard Serra



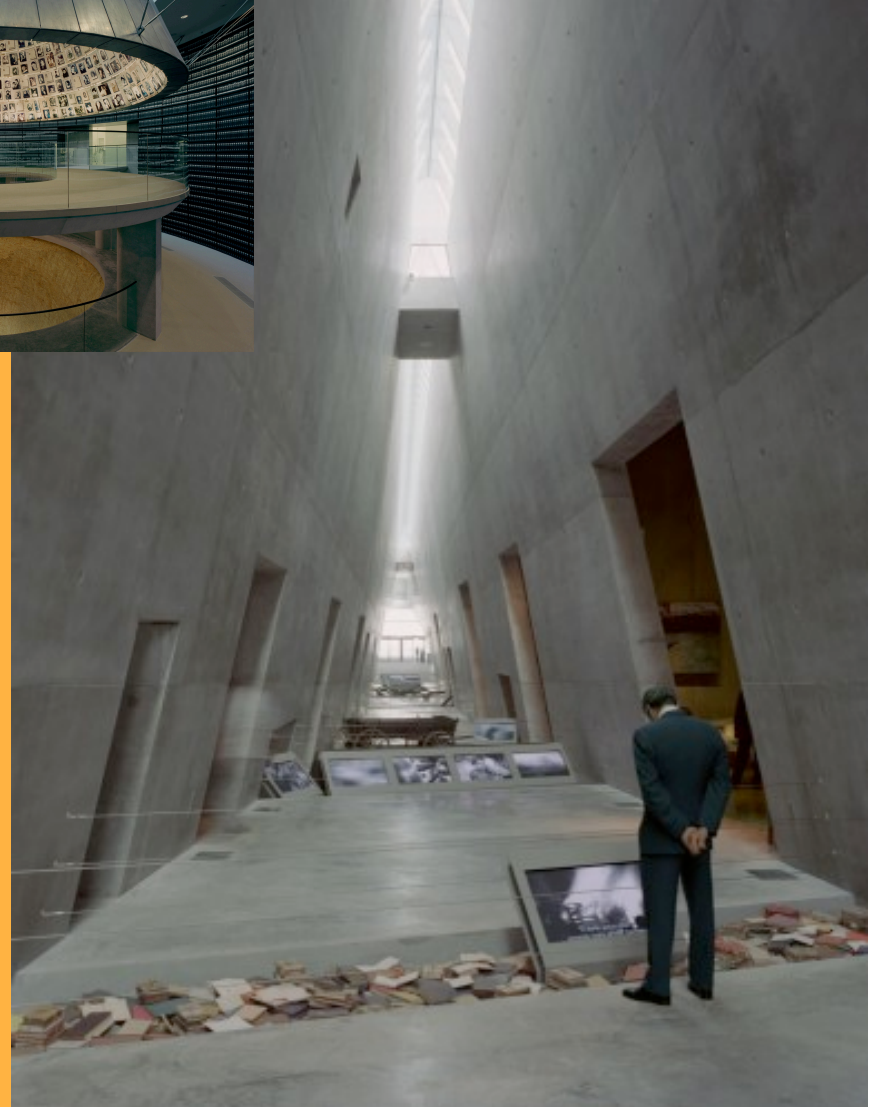
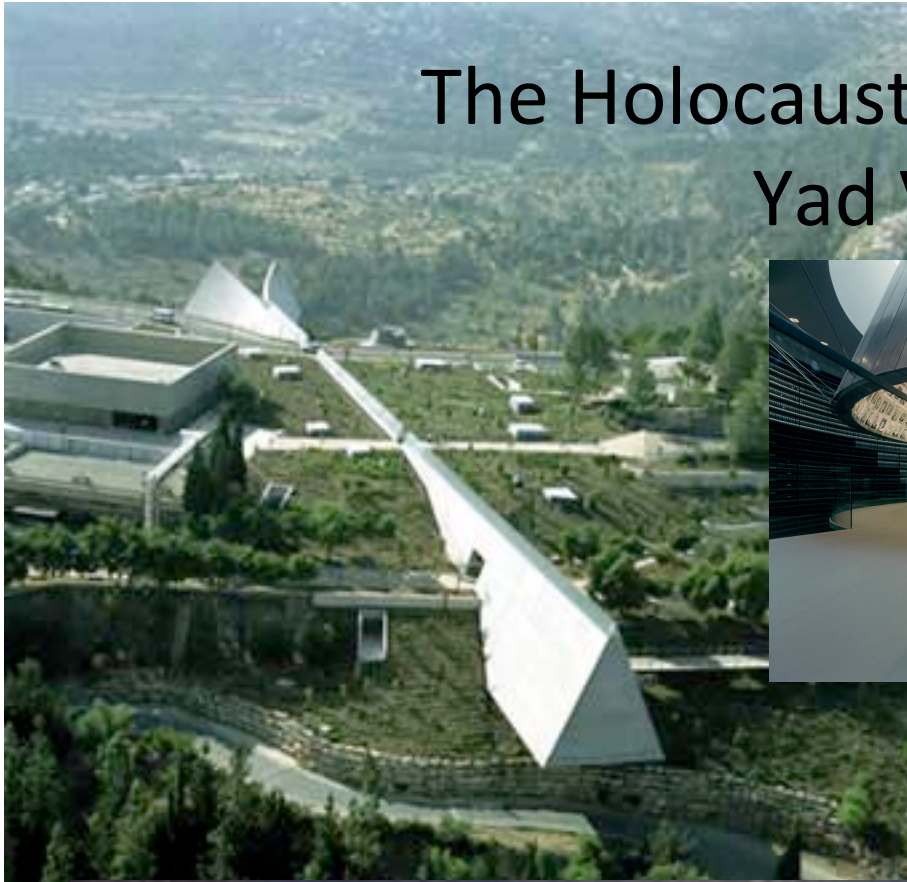
# The Killing Fields (Cambodia)



# Củ Chi tunnels (Vietnam)



# The Holocaust History Museum Yad Vashem



Dr. Strange by Steve Ditko  
(black light Poster)



**MAKE IT UP! FILL IT UP!**



# Fantastic Places

What else??

# Fantastic Bodies

- District 9
- The Thing
- Furies
- Bioclothes
- Radiolaria



# District 9



Augmented Hand  
is a tired trope



# The Thing (John Carpenter)



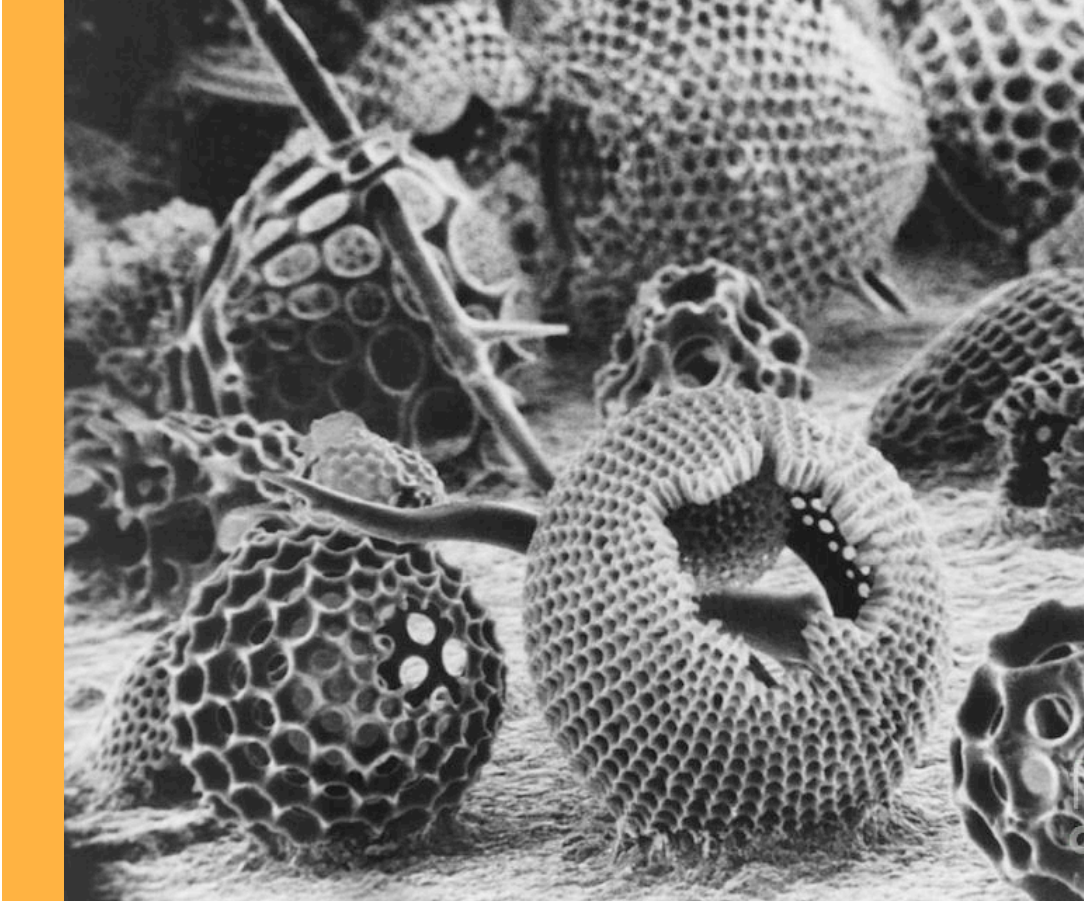
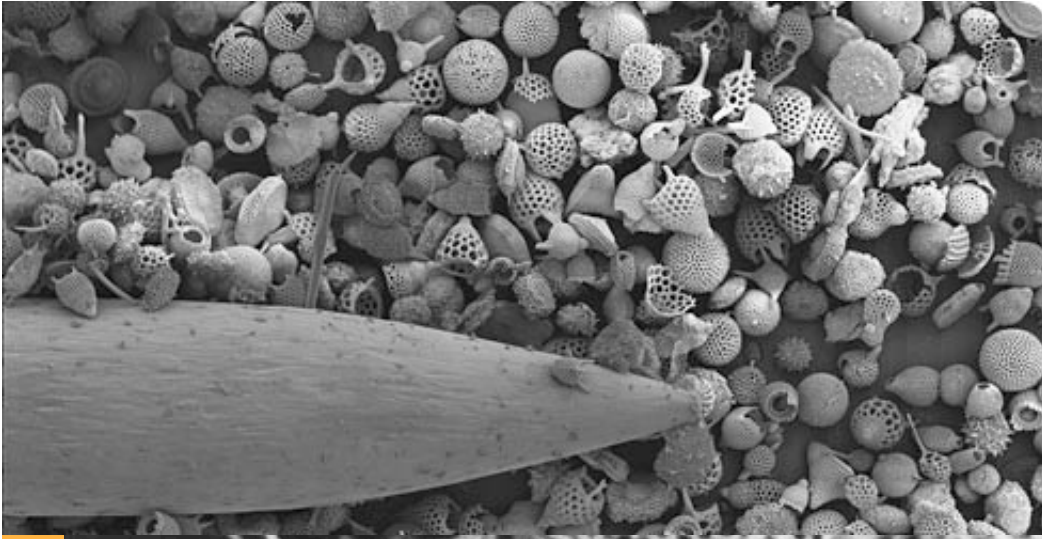
# Furries



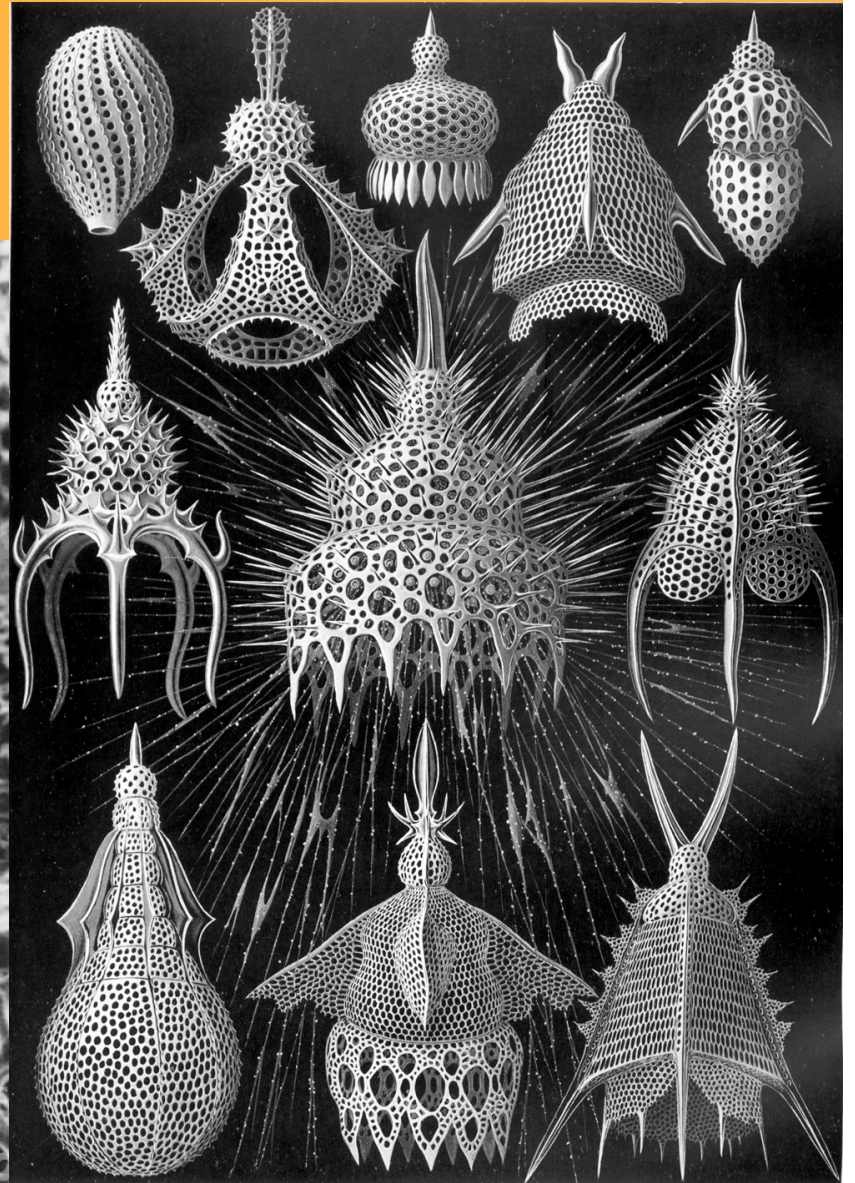
costumefail.com

# Bioclothes





# Radiolaria



# Fantastic Bodies

What else??

# Fantastic Senses

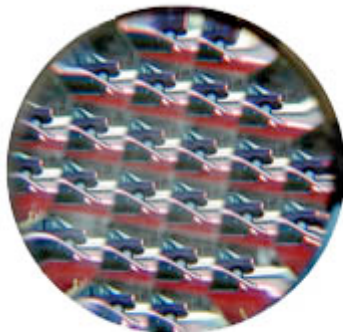
- Geordi La Forge vision
- Insect vision



# Geordi La Forge vision



# Insect vision



Hollywood Version



Insect Vision

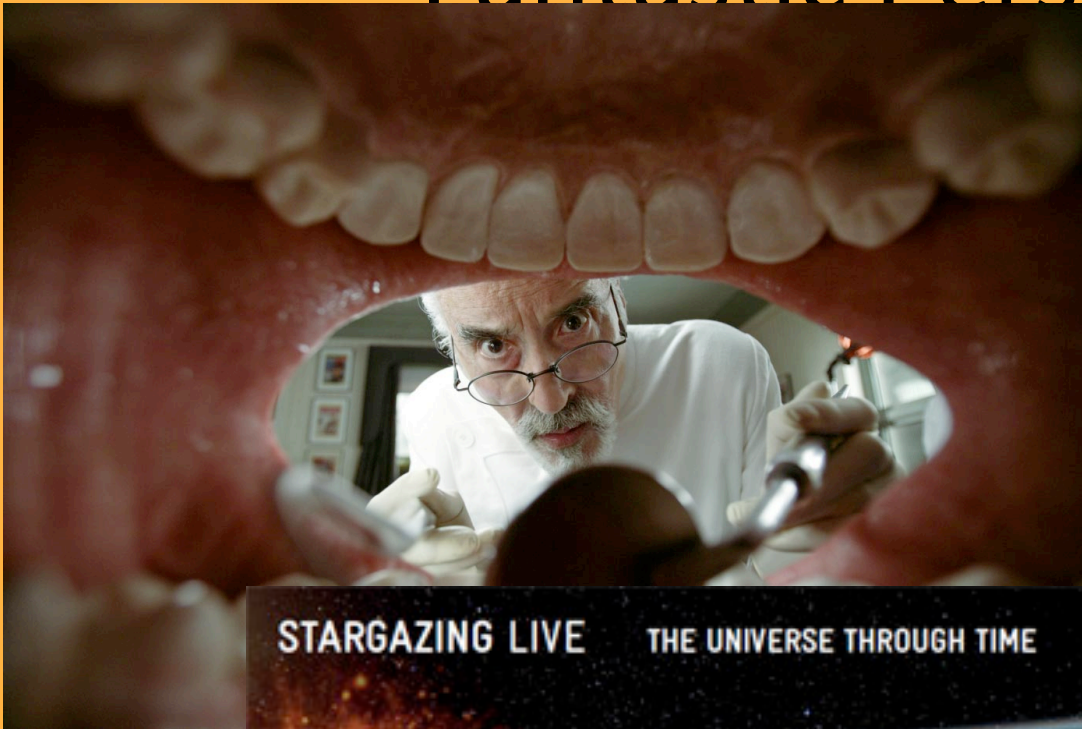


Human Vision

# Fantastic Senses

What else??

# Fantastic Perspectives



# Fantastic Perspectives

What else??

# Project #1

## Fantastic Non-human VR Toy

1. player is in a **strange place**
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# Fun Stuff?

1. easy to see HUGE effect of your actions in the world  
(over-the-top positive feedback)
2. toylike, playful, curiosity-inducing
3. not killing, shooting, or flying but...
  - slithering, teleporting, ascending
  - transforming, oozing, shifting
  - creating, spawning, replicating
  - slapping, flicking, kissing, birthing
  - squawking, bleating, croaking

Any Questions?