Intro to AR Game Design and Development

www.BrianSchrank.com

What AR is

What we want

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What we want

gimmicky fun for minutes

Fully engaging human experience for hours

This took a while

So how can we develop for AR?

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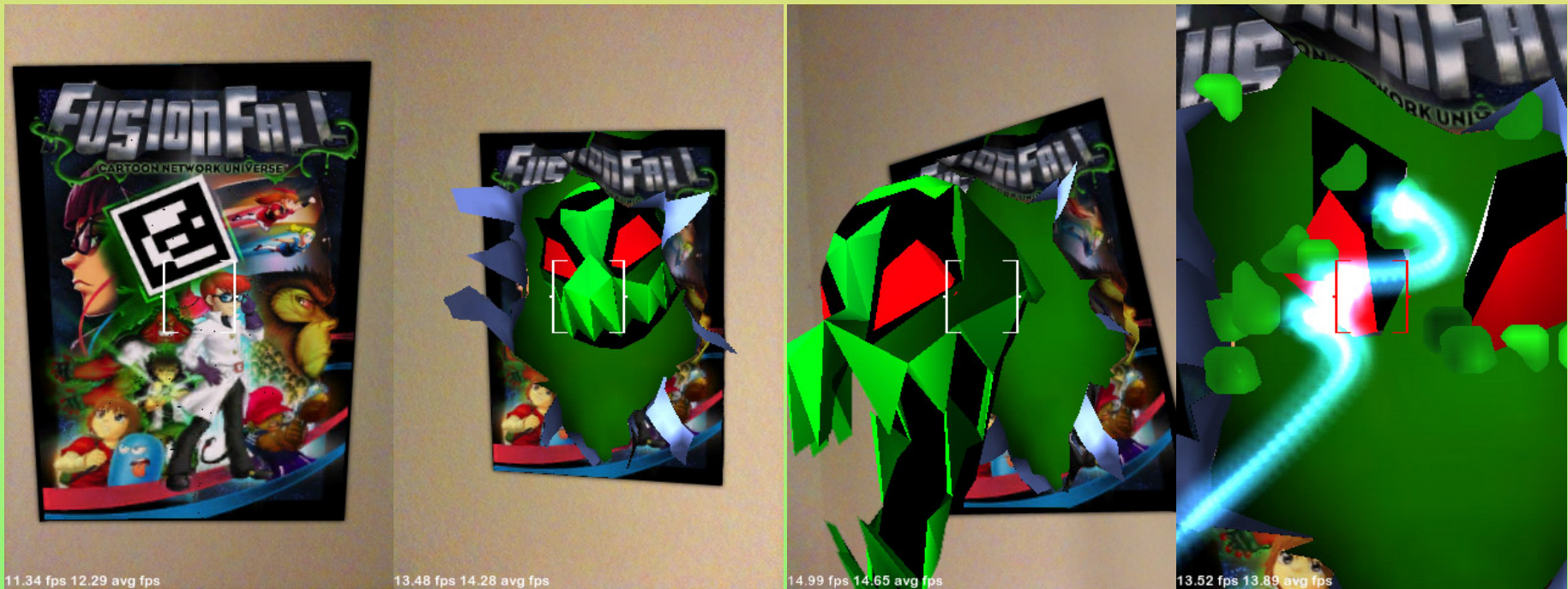## —Gunpei Yokoi (inventor of Game Boy)

How to design play with cheap
well-understood tech?

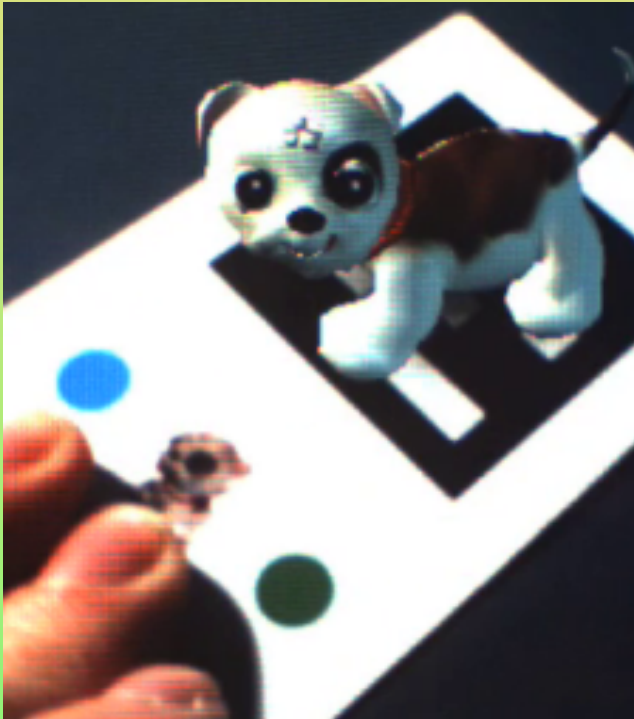# Lateral Thinking with **Emerging** Technology

Lateral Thinking with **Emerging** Technology
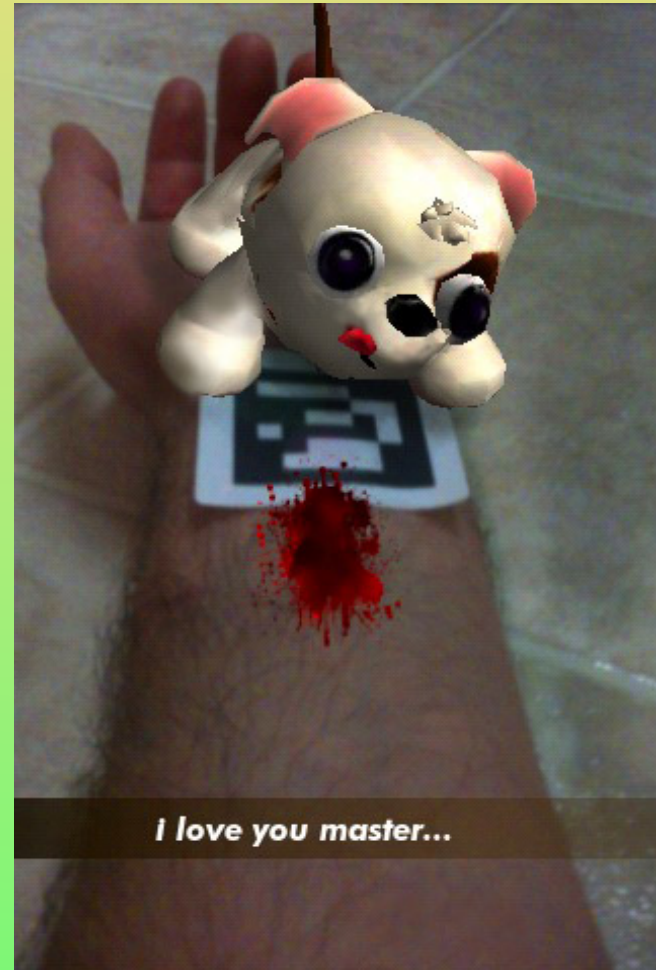# Cartoon Network / Qualcomm

Handheld AR 2006-2010

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Aiming Close and Still — **Scanning** Far and Moving — **Inspecting** Close and Moving — **Observing** Far and Still
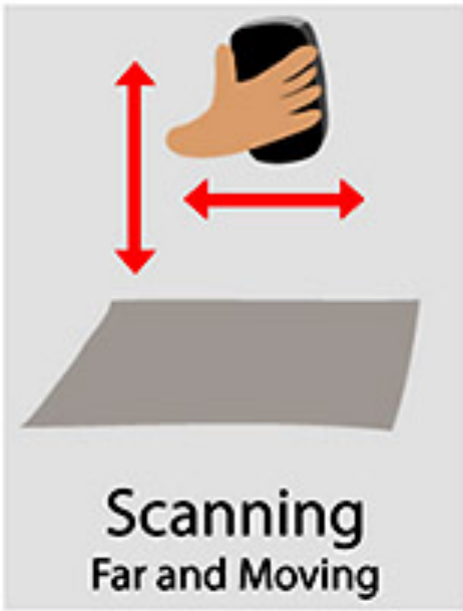
Handheld AR 2006-2010

Handheld AR works well with

- Device (phone) as metaphor
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- Virtual creatures
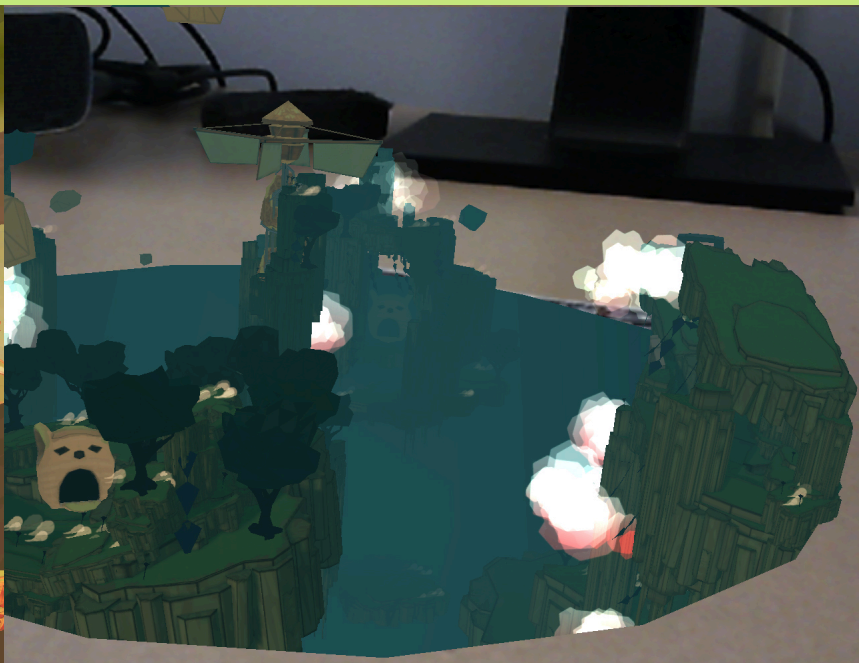 - Little reactive creatures activate, charm the space

AR Game Dev DePaul

Hololens Game Dev DePaul

- First AR platform without any slippage
  - Virtual has equal *presence* as real
  - Presence vs. Immersion

Hololens Game Dev DePaul (Spring 2017)

- First AR platform without any slippage
  - Virtual has equal *presence* as real
  - Presence vs. Immersion
- What new kinds of play does it afford?
  - Device **and real-world** as metaphor?
    - Real table is also virtual boat, etc.
  - Flexible-social bodies **as input or environment?**
    - Your friend's arm on table is bouncy platform, etc.
  - Use the **limited 30° FOV** as a quirky feature?
    - Don't ignore the obvious flaw, play with it.

Hololens Game Dev DePaul (Spring 2017)

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  - Virtual____ _esence_
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  - Use the **I____ 30° FOV** as a ____ feature?
    - Don't igno____ the obvious flaw, play ____ with it.

Not good enough!

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        - Any spherical object is on fire, rectangular objects spout water
    - Adult ideas, theatrical ideas
        - Face-swapping, Mystique-play (continually changing)

Some Notes on VR Games

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Vengeance
(Fall 2003)

Initial Goals of Dumpy (2013)

- 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**
- Setting up trunk swing mechanic to be useful **in a new way every few seconds**

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)

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

Dumpy Art

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- Since I wasn't "artist" I could do all the art fast in a really shitty way
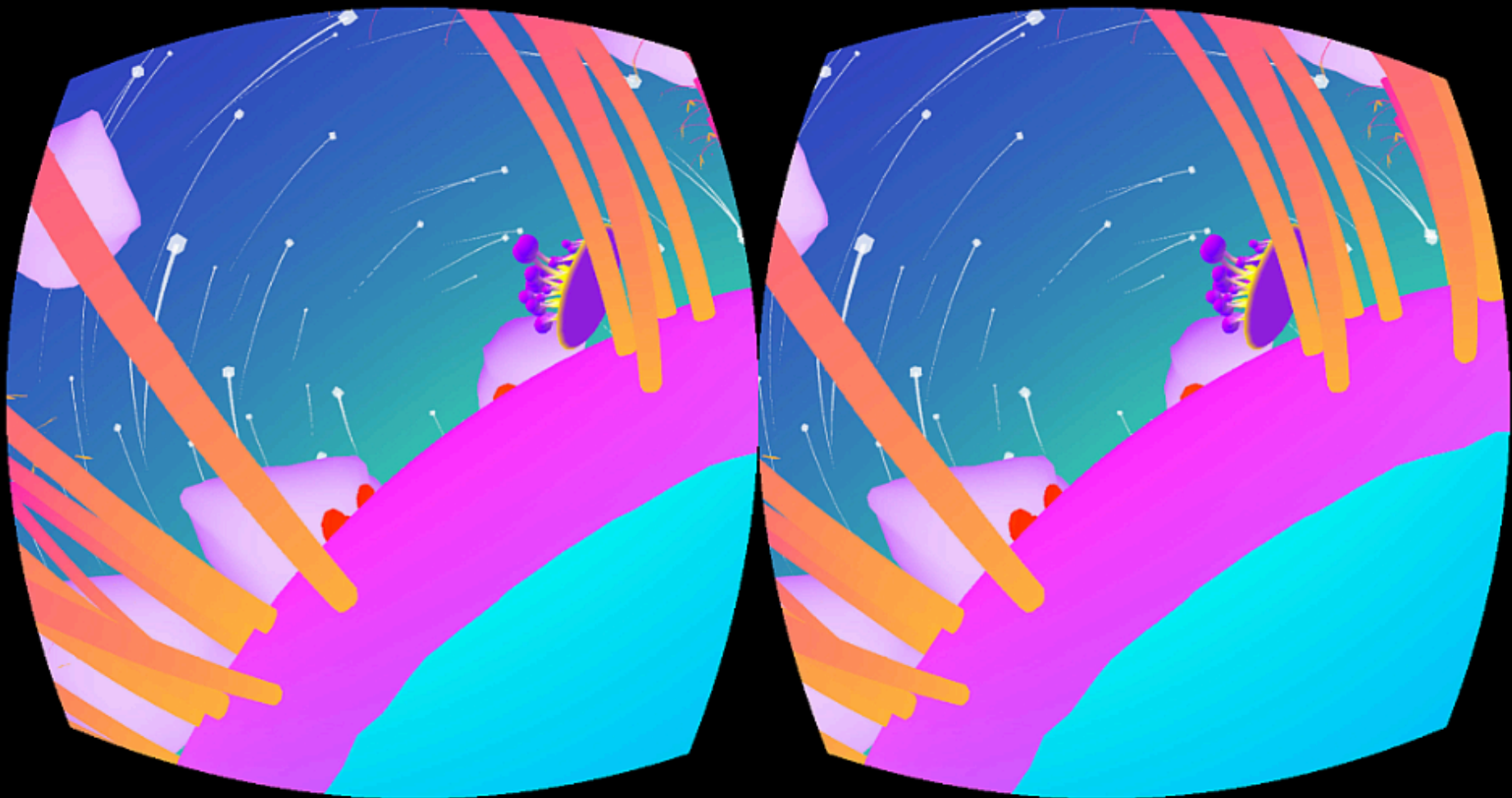 - If I spent more than "no time" on art it looked bad

A Moment Free from Darkness
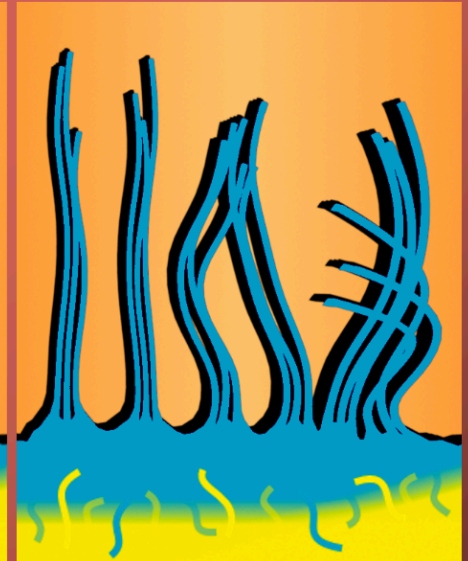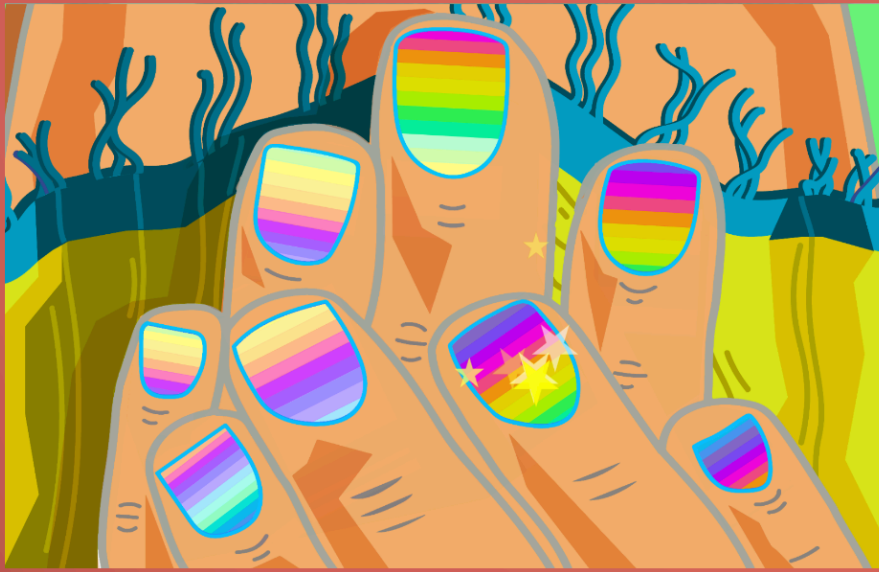
VR Game Dev Class DePaul

- Use unique affordances of VR
  - Strong sense of presence and embodiment
  - Head position and rotation
- Create 3-4 very short games in 11 weeks
- Immerse player in fantastic:
  1. Bodies
  2. Spaces
  3. Playgrounds
  4. Final projects

VR Game Dev Class DePaul

Comments, Questions?

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