

# TCC Online Augmented Reality Meets Tangible Media

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衆瞽  
摸象之圖



# Technology Chimera



Indian Parable:

# 6 Men at Midnight and an Elephant

- touch an elephant to understand it:
- Each one feels a different part:
  - Side
  - Tusk
  - Trunk
  - Tail
  - Leg
  - Ear
- They compare notes and learn that they are in complete disagreement with what they are dealing with





# What is Augmented Reality (AR)



# Google Glasses



# What is Augmented Reality (AR)

- Combines
  - A live view of the physical, real-world environment
  - Uses elements of **computer vision** and 2D/3D Tracking
  - With elements that are *augmented* (or supplemented) by computer-generated information: sound, video, graphics or GPS data
- Related to **mediated reality**, in which a view of reality is modified (possibly even diminished rather than augmented) by a computer



# Connections to Augmented Reality

- Tangible Media Class (now Physical Interface Design)
- NY Path Through History Tourism Grant
- Moonbot: Fantastic Flying Books of Morris Lessmore



# Market Leaders & Resources

- Augmented World Expo (AWE 2013)
  - Augmented Reality Product Leader winners:
    - Metaio
    - Aurasma
    - Vuforia
    - Wikitude
    - DARAM
    - ARToolkit
  - Also: Layar, Huntzz, Augment...etc...

# Challenges

- Computer Vision Algorithm
  - Contrast
  - Clearly defined lines
  - Asymmetrical
- 3D Augmented Reality
  - Geometry constraints
  - Quirky
- New Technology Bleeding Edge Issues

# Metaio / Junaio



6abc Virtual View uses junaio for interactive TV experience : November 28, 2013



# How to Augmented Reality on a smart device (phone / tablet)

- Install software on your phone
- Easy as 123D
  1. Pick a Trigger image\*\*
  2. Make, choose, or upload an overlay
    - Image
    - Video
  3. Test

# Trigger Images Heuristics

- Fairly high contrast
- Asymmetrical
- Edges & patterns (not gradients)

# Aurasma

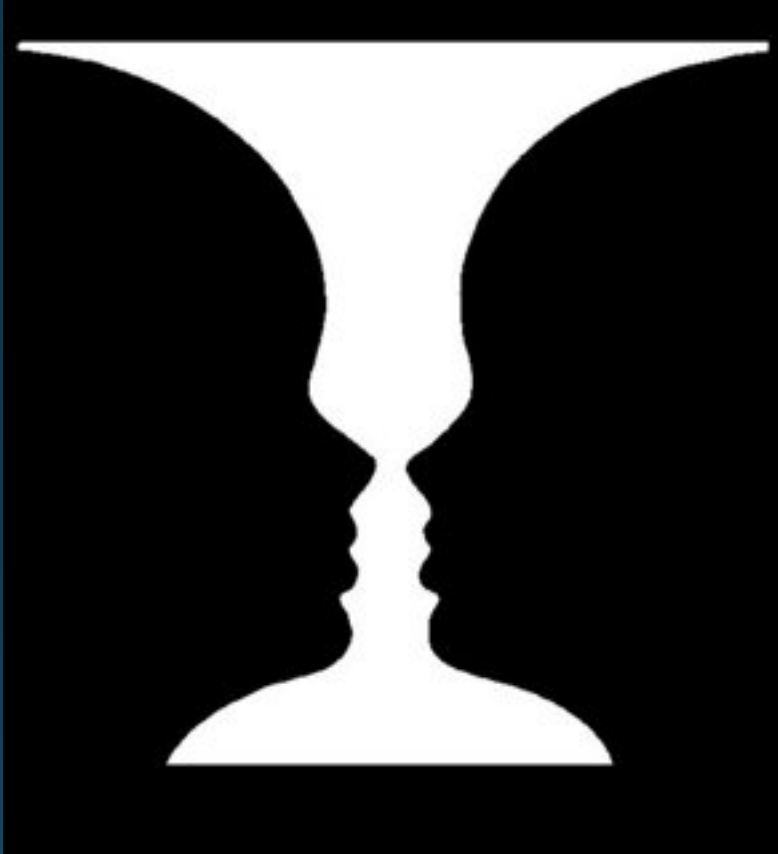


# Intermediate

- 3D Object tracking
- 3D Object Integration
- POI's (Points of Interest): Birdsvievw
- Interactivity:
  - Launch websites
  - Add animations



# Foreground & Background



Show the “inside of something”



# Transform or Instruct





# Design Possibilities

Guerrilla Marketing

◀ prev

next ▶

## 10 Rockstar Examples of Augmented Reality for 2014

Krista Deluna · February 7, 2014

Topics:

AR

Augmented Reality

campaigns

marketing

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# The Assignment

- Combine
  - Arduino driven mechanistic movement
  - Physical 3D laser cut design
  - Triggers Augmented reality
- Design must accomplish a mix between the physical and virtual worlds