



DER BLICK NACH VORNE - FORSCHUNGSAUSSICHTEN AUF VR

Jeremiah Diephuis | Playful Interactive Environments | FH Oberösterreich





Saving the world
one game
at a time



HektAR: Nachhaltigkeitspiel in AR



CoVAR: Mixed Reality im Museum



CATRINA: Zivilcourage in VR



VIRE: Entspannung in VR



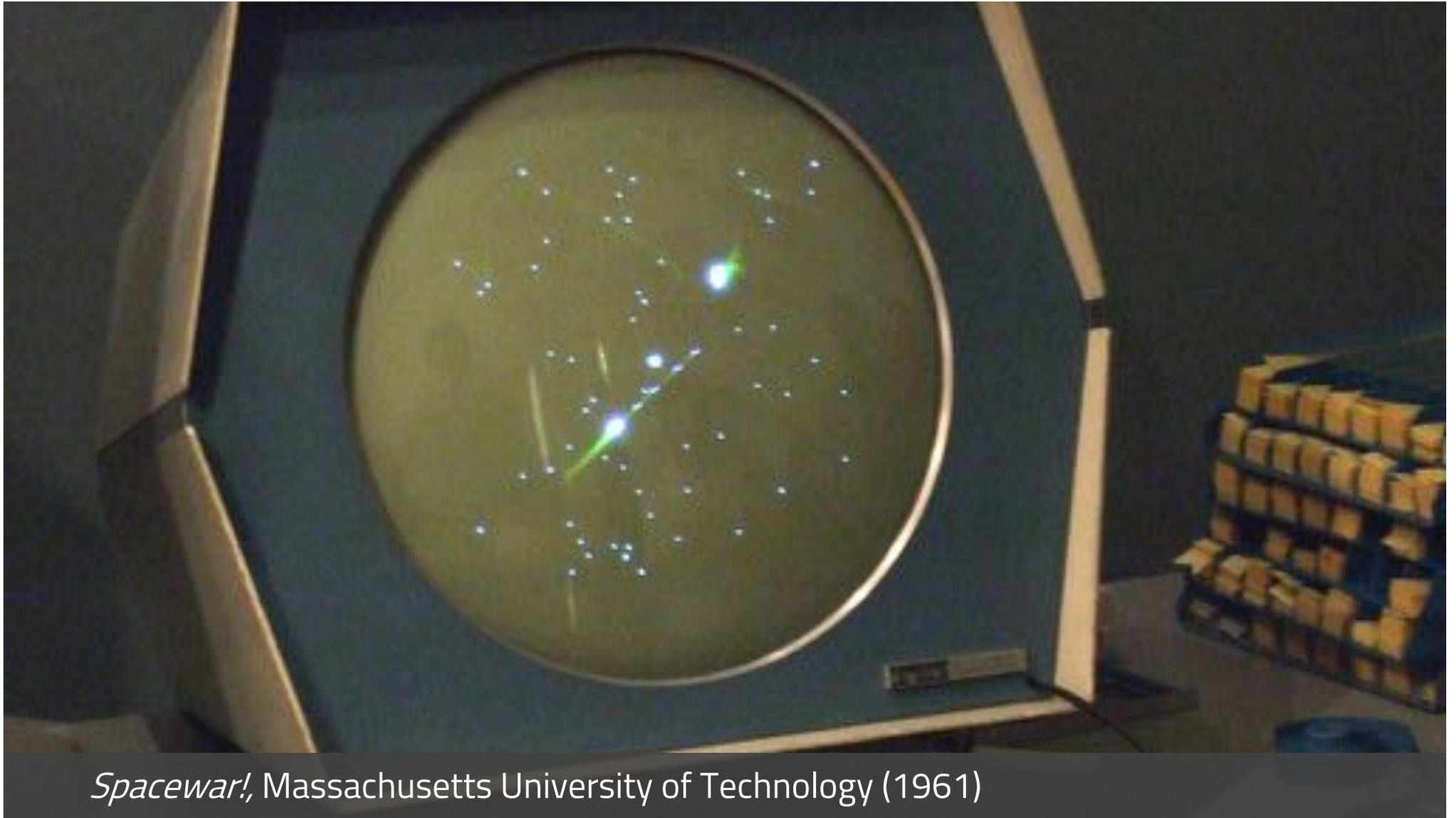
ENTERTAINMENT INDUSTRIES 2018

GAMING
INDUSTRY
\$137B

FILM
INDUSTRY
\$41B

MUSIC
INDUSTRY
\$19B

Quelle: Newzoo



Spacewar!, Massachusetts University of Technology (1961)



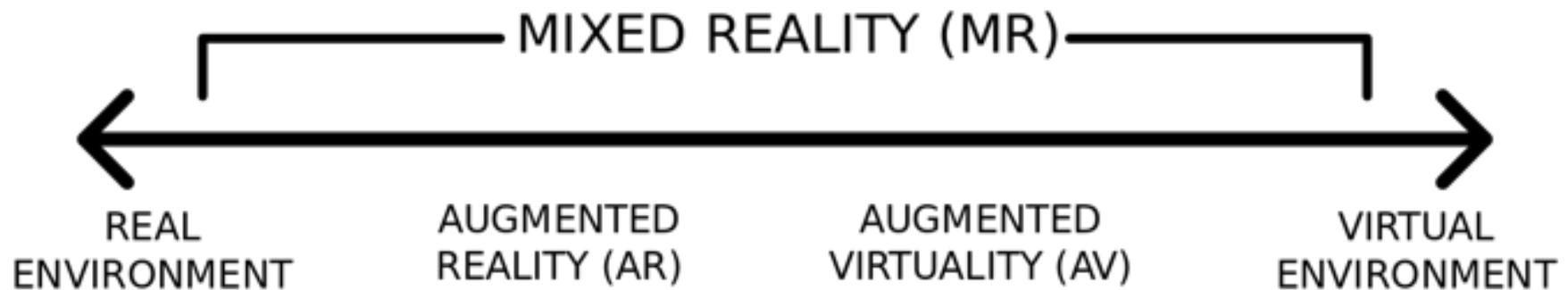
Voodoo 3D card, 3dfx (1996)



VFX1 Headgear, Forte Technologies (1995)

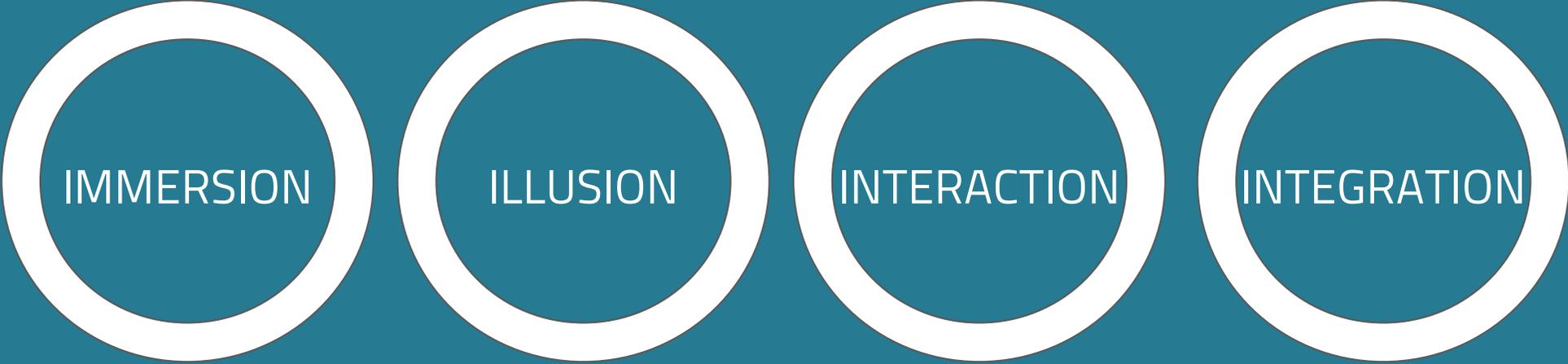


Paul Milgram et al, Augmented Reality: a Class of Displays on the Reality-Virtuality Continuum (1994)



A young boy is shown in profile, wearing a VR headset and looking towards the right with an open-mouthed expression of excitement. He is wearing a red and black plaid shirt. In his right hand, he holds a clear plastic cup with a green straw, and in his left hand, he holds a large, patterned bowl of popcorn. The background is dark and dimly lit with a blueish tint. The text "MEDIA CONVERGENCE" is overlaid in the center in a white, bold, sans-serif font.

MEDIA CONVERGENCE



IMMERSION

ILLUSION

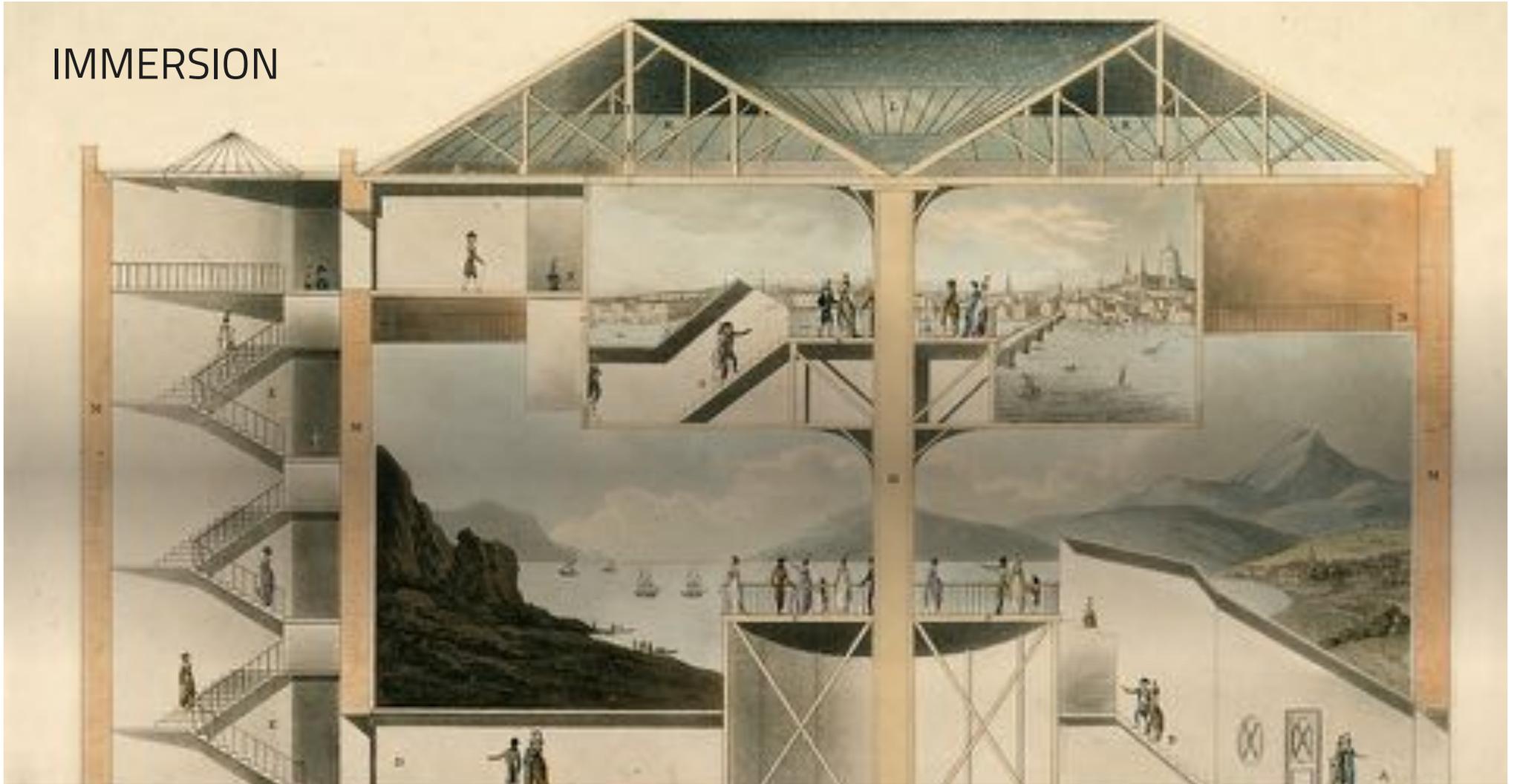
INTERACTION

INTEGRATION



IMMERSION

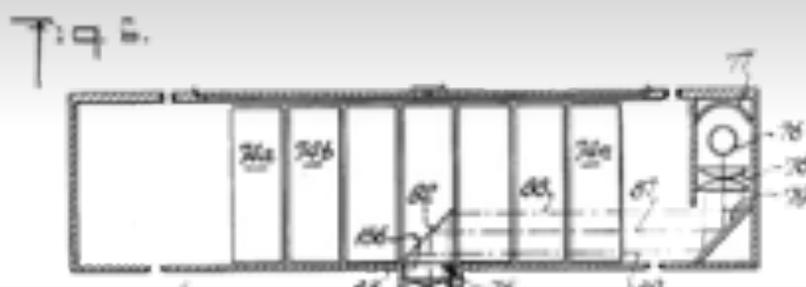
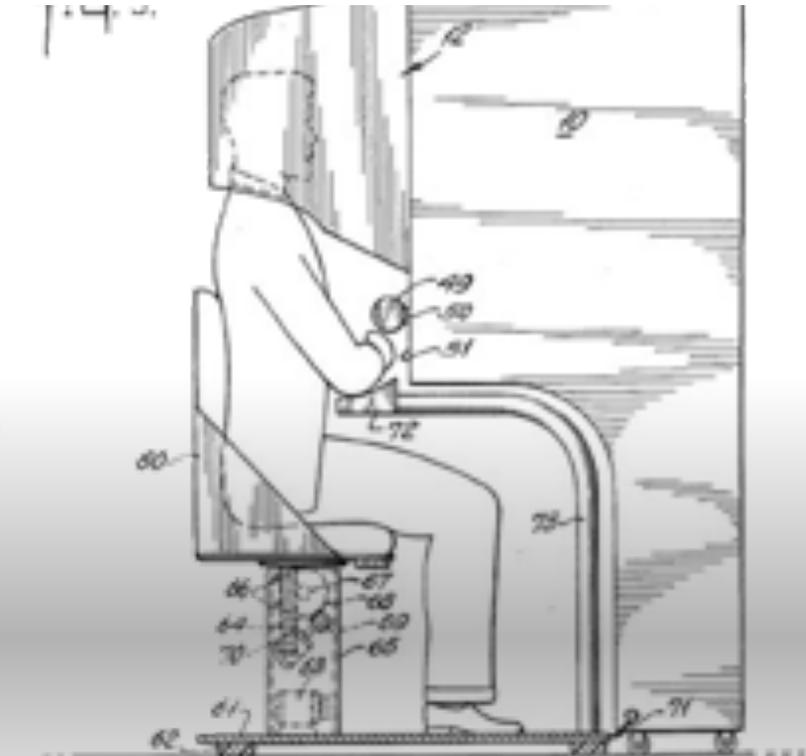
IMMERSION



Edinburgh & London Panoramas, Robert Barker (1787/1793)

IMMERSION

- 3-D
- WIDE VISION
- MOTION
- COLOR
- STEREO-SOUND
- AROMAS
- WIND



• *Sensorama*, Morton Heilig (1962)

PATENTED

IMMERSION



CAVE Automatic Virtual Environment (1992)



ILLUSION

ILLUSION



Lenticular stereoscope, Sir David Brewster (1860)

ILLUSION

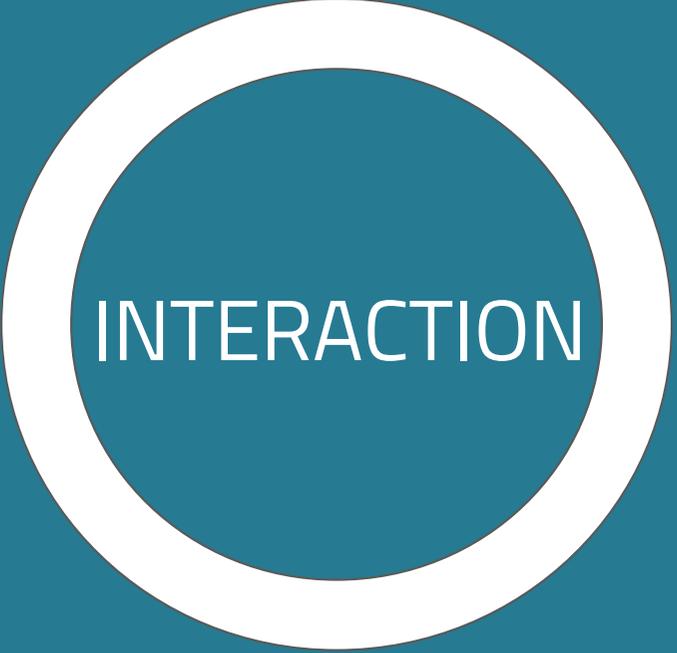


View-Master, General Aniline & Film (1966)

ILLUSION

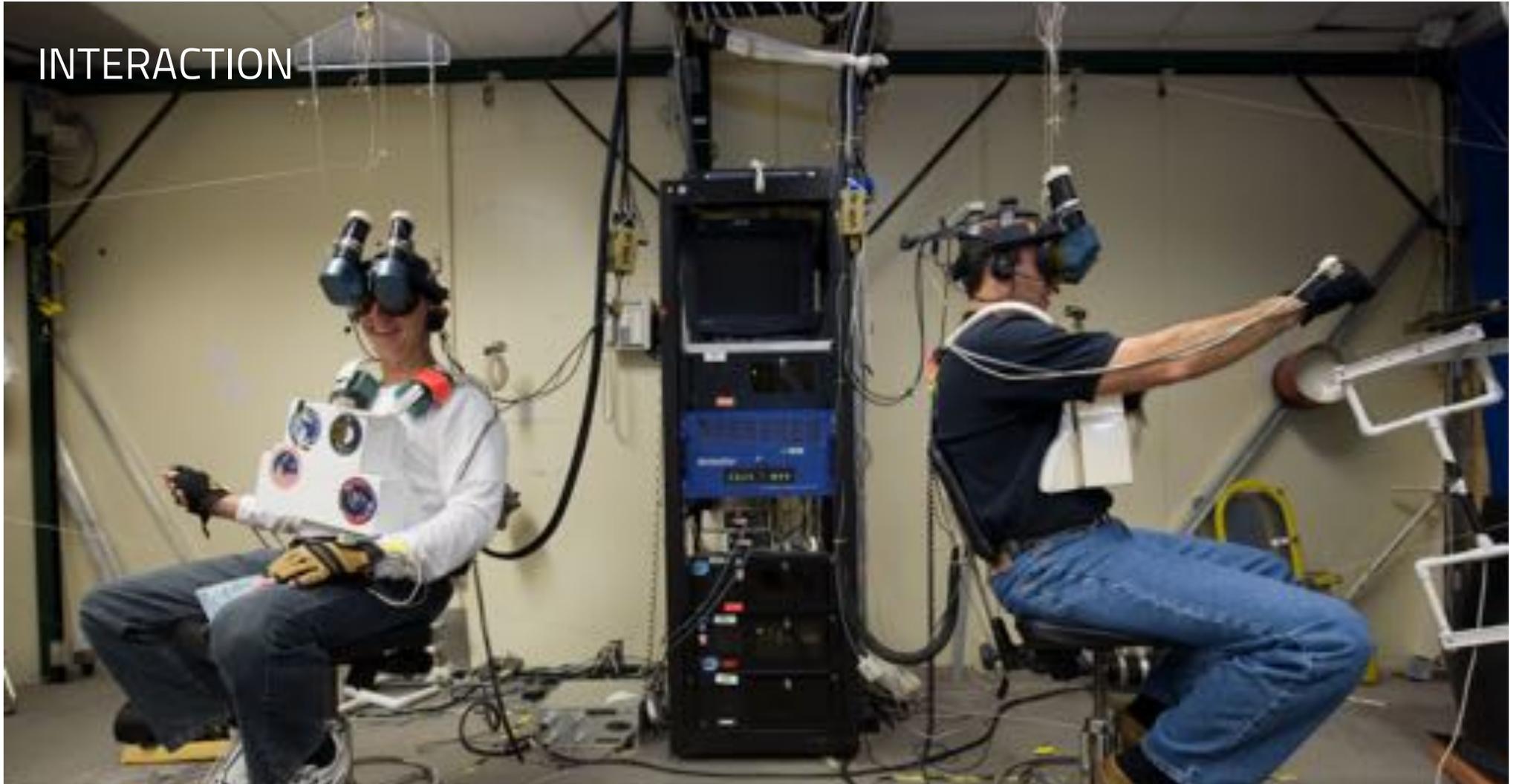


Gear VR, Samsung (2015)



INTERACTION

INTERACTION



Dynamic Onboard Ubiquitous Graphic (DOUG), NASA (1990)

INTERACTION



Disney Quest, Walt Disney Entertainment (1998)

INTERACTION

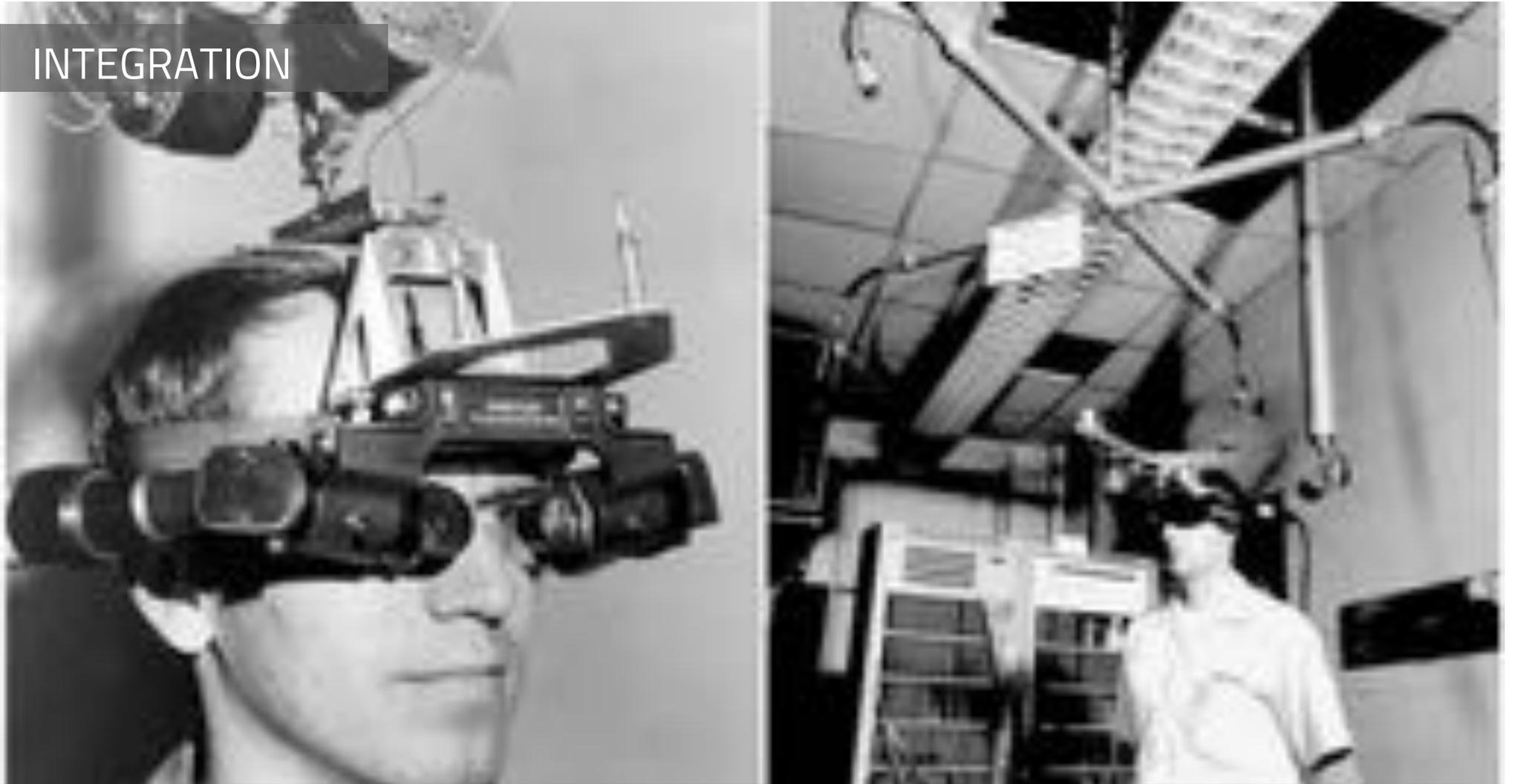


HTC Vive, Valve/HTC (2016)



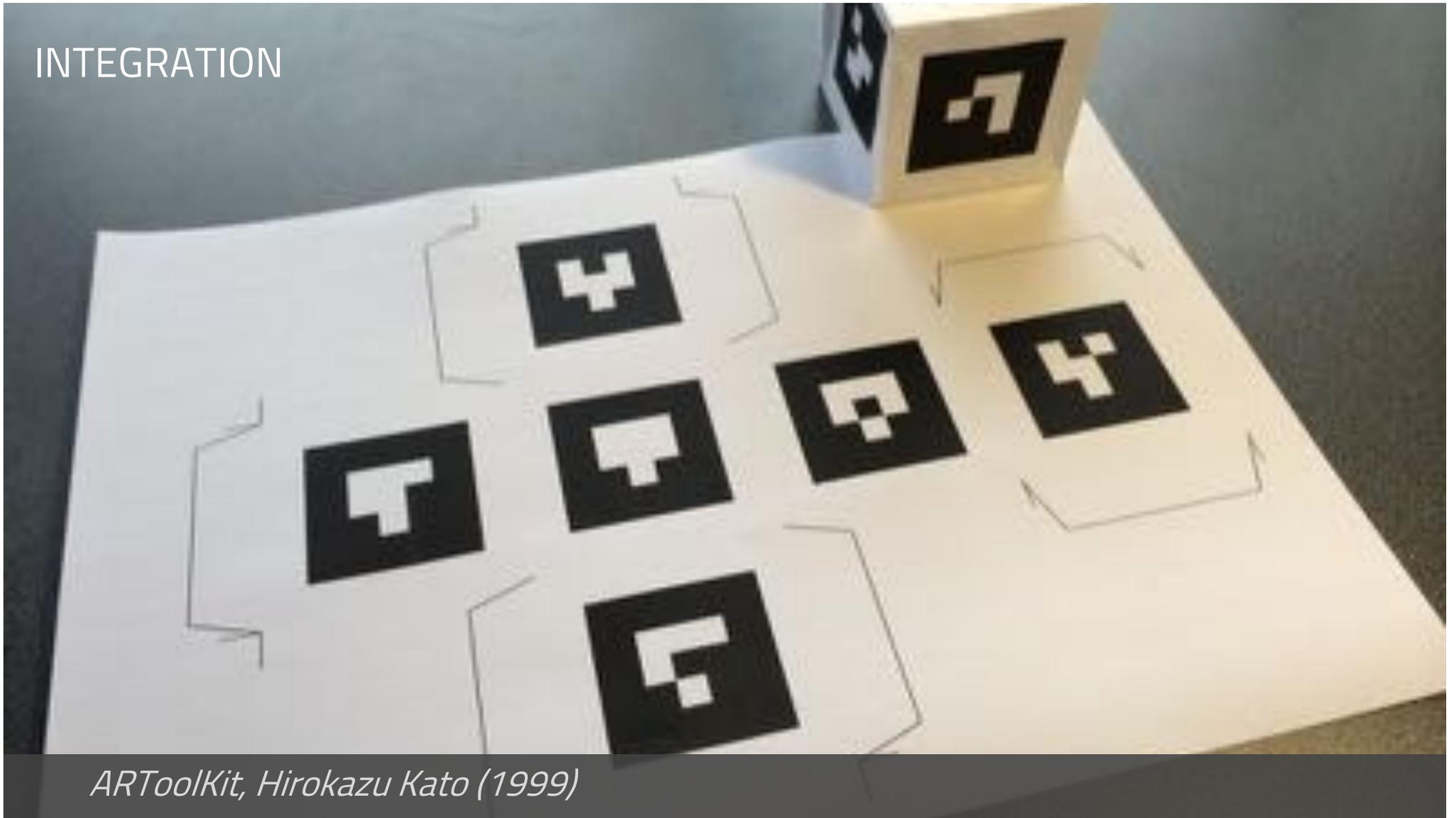
INTEGRATION

INTEGRATION



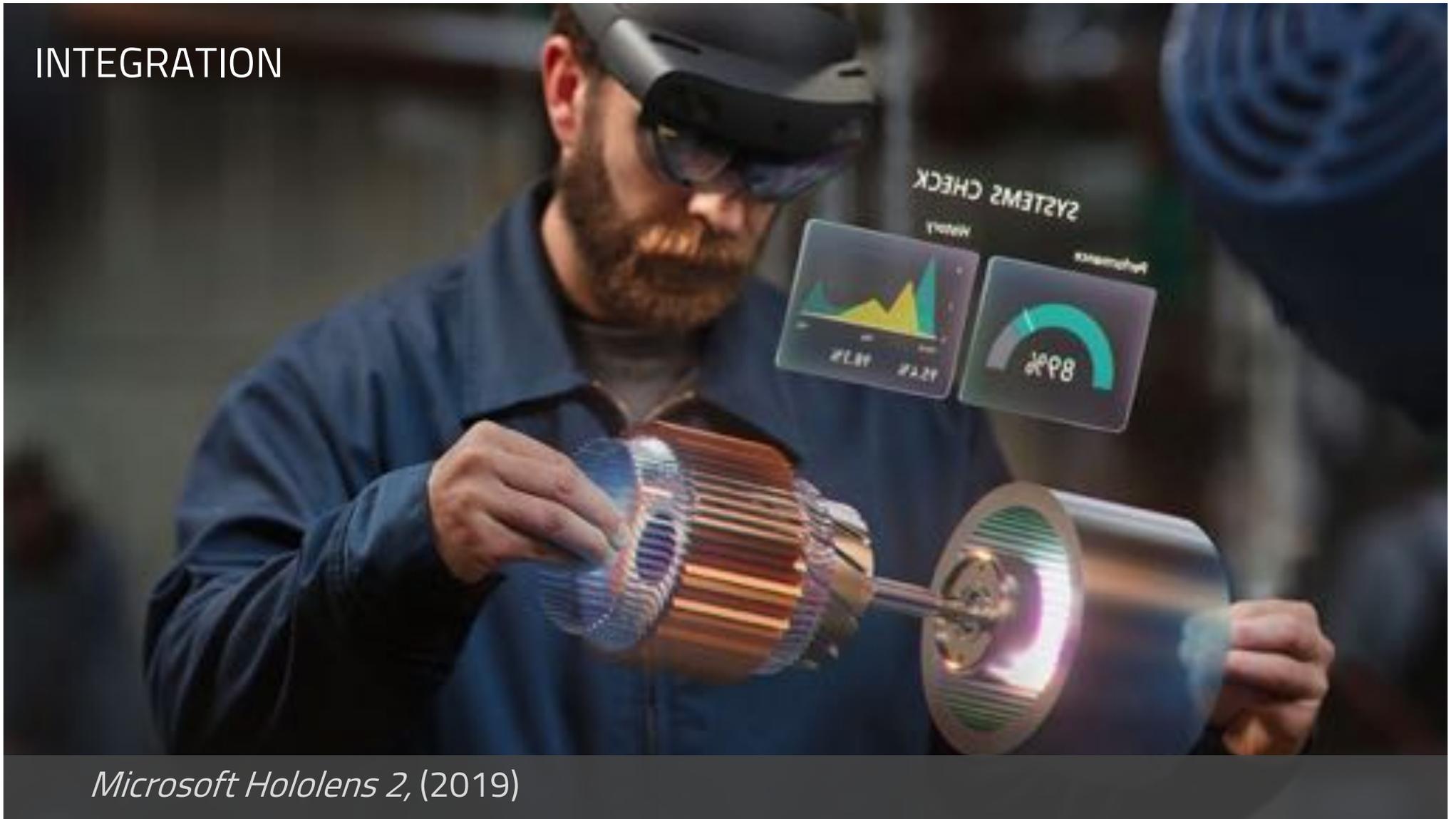
The Sword of Damocles, Ivan Sutherland (1968)

INTEGRATION

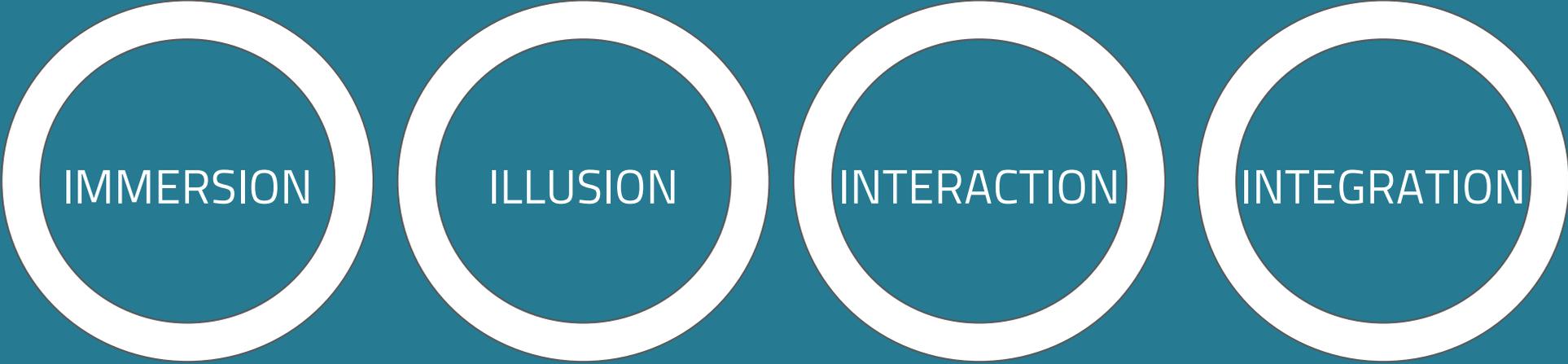


ARToolKit, Hirokazu Kato (1999)

INTEGRATION



Microsoft HoloLens 2, (2019)



IMMERSION

ILLUSION

INTERACTION

INTEGRATION



INCLUSION

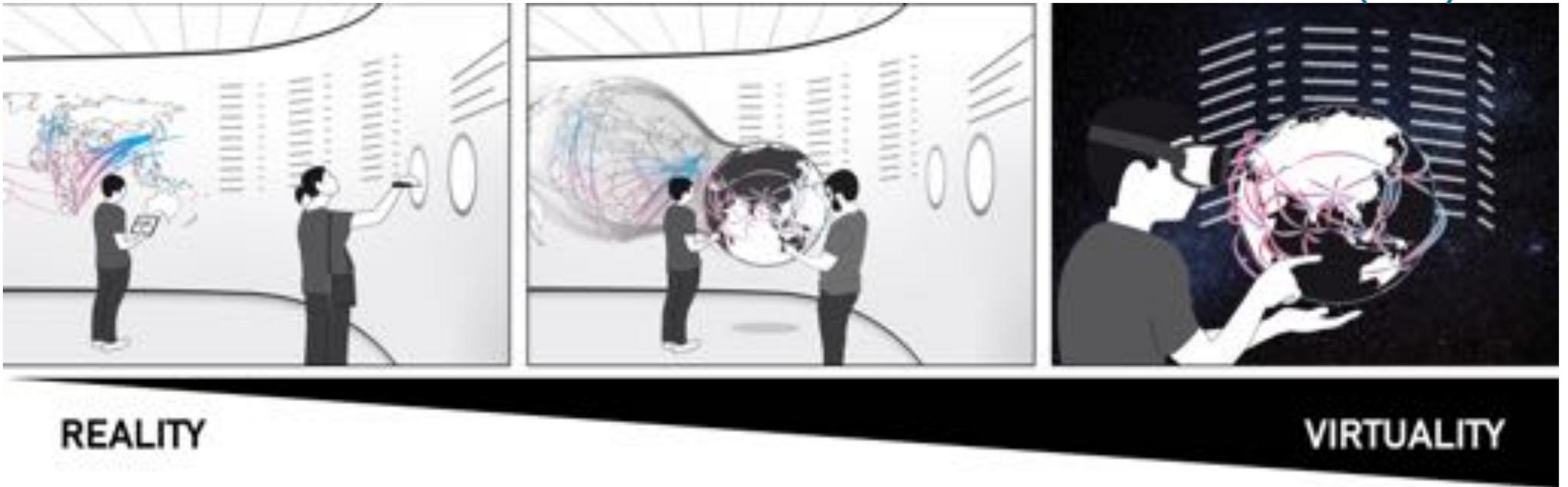
INCLUSION

 PLAYFUL
INTERACTIVE
ENVIRONMENTS



Multimodal, multiuser environments (*Virtual House of Medusa*)

INCLUSION



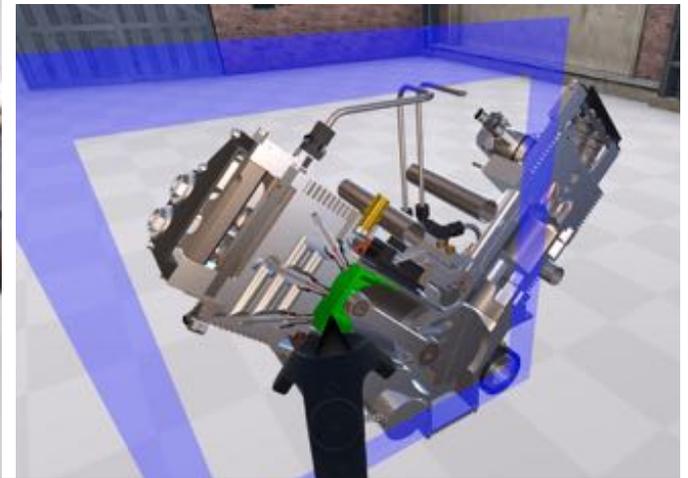
REALITY

VIRTUALITY

Cross-virtuality (X-Pro)



Smart Factory Lab



Multiple user roles (Mixed Reality Based Collaboration 4 Industry)



A CALL TO ACTION



Playful Interactive Environments

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Thanks!