



VRDC

Presence, Agency, Social: Shaping Great VR Experiences

Thomas Bedenk
VR Consultant, Exozet

How can I use social
elements to make my
own VR project better?



Thomas Bedenk

DIPLOM DESIGNER & M.SC. HUMAN FACTORS



TCTomm

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Virtual Reality Consultant



Design

Human Factors

Image: <https://www.flickr.com/photos/healthblog/>

ZEIT²



BRIGHTSIDE
games

XBOX LIVE
arcade

STEAM

UBISOFT

An aerial photograph of an airport tarmac under a clear blue sky. A large, curved hangar with a green and white facade is the central focus. A small white airplane is parked on the tarmac in the lower left. The hangar's roof is dark and textured. In the background, other airport buildings and a distant city skyline are visible.

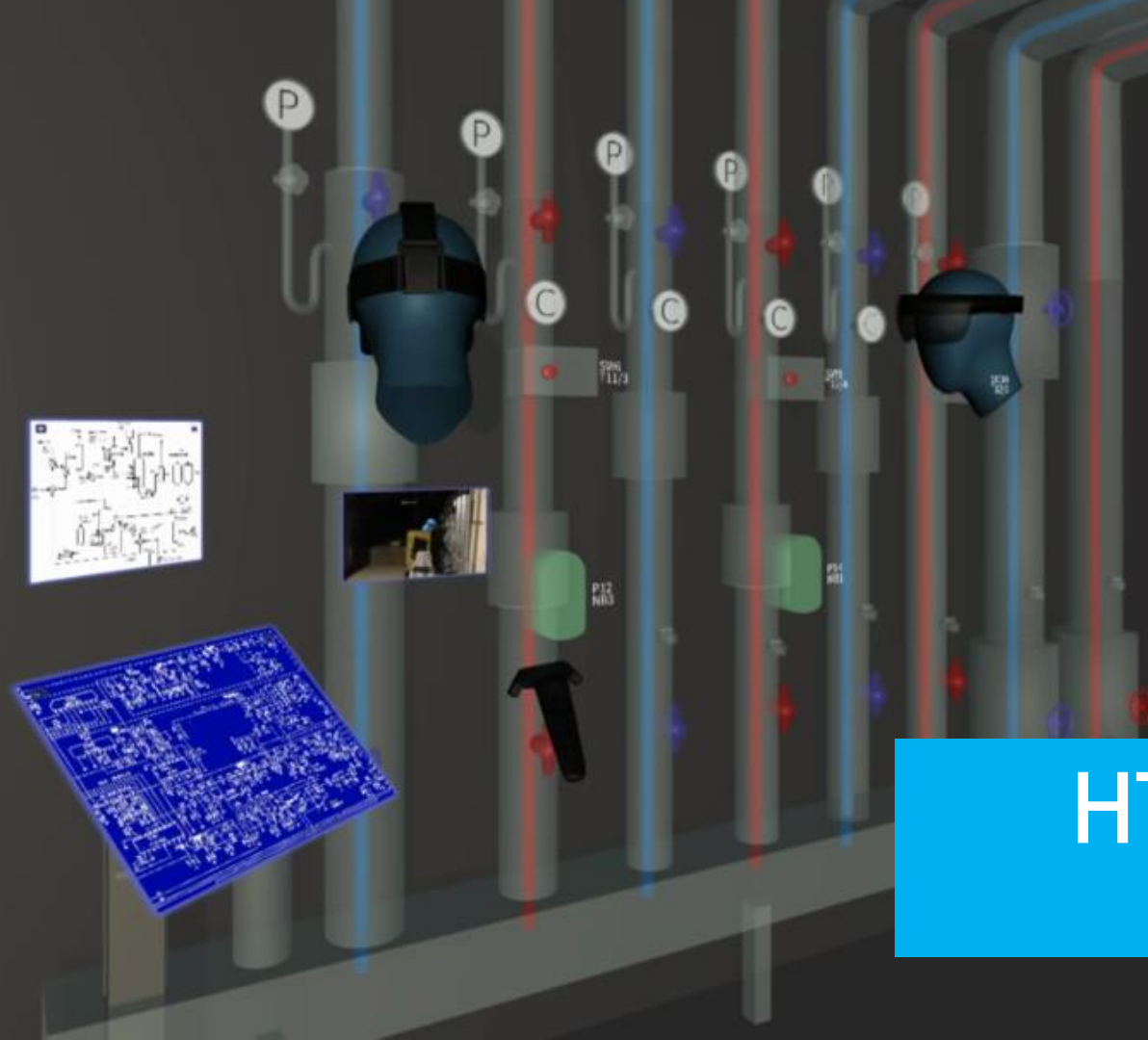
exozet

— *Agency For Digital Transformation* —

A man with a beard, wearing a dark long-sleeved shirt and dark trousers, stands in profile facing left. He is wearing a Microsoft HoloLens headset. He is in a technical room with several large, vertical, silver-colored industrial units. Each unit has multiple pressure gauges and control panels. A blue plastic jug is on the floor in the foreground. A metal ladder is leaning against the units. A large grey electrical cabinet is on the right. The background shows a doorway and some wiring on the wall.

HoloLens

Remote



HTC Vive
Local

C

SW6
T11/3

C

C

SW8
T12/4

C

P

C

SW10
T12/6



Think outside the box!



Cognitive Psychology of Virtual Reality: Basics, Problems and Tips

Thomas Bedenk

VR Consultant, Exozet

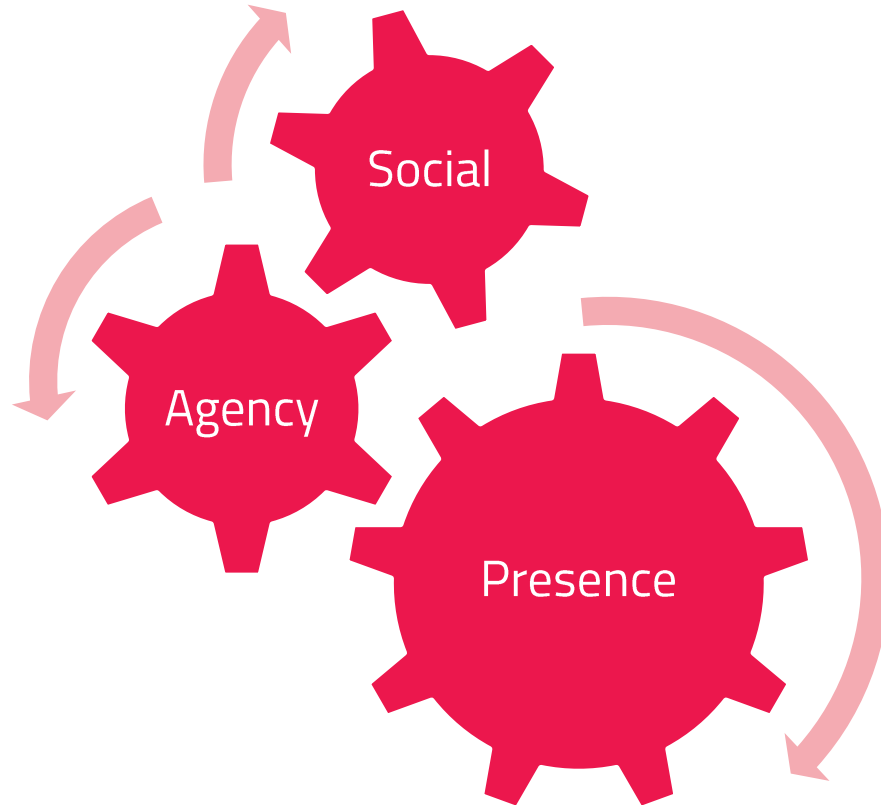
Presence





https://www.reddit.com/r/gaming/comments/49vfa2/leaning_on_virtual_desks/

VR AS A NEW MEDIUM





Psychology of Virtual Reality - Presence, Agency, Social

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VR Consultant, Exozet

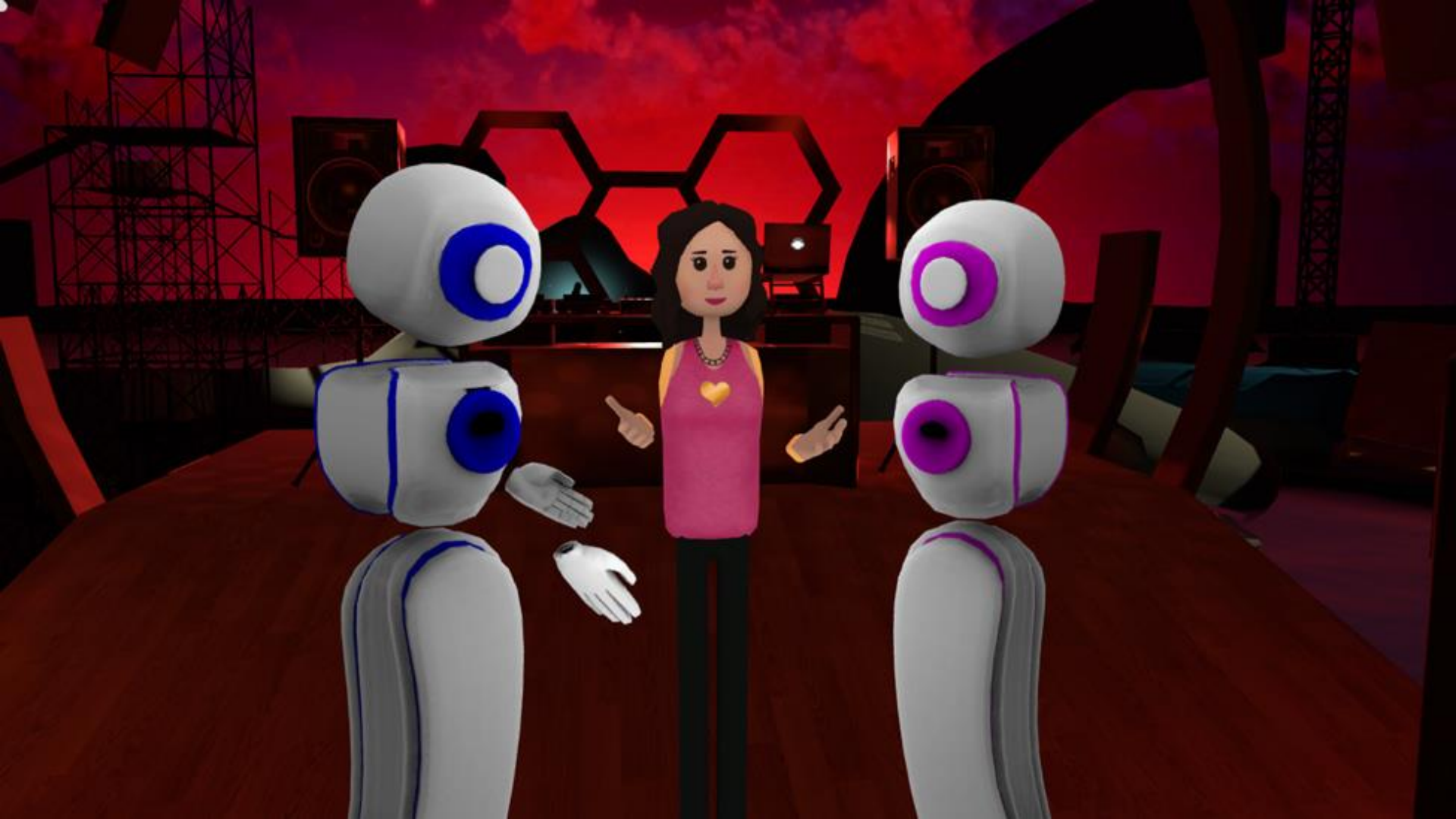


Agency
Role

Avatars vs Agents

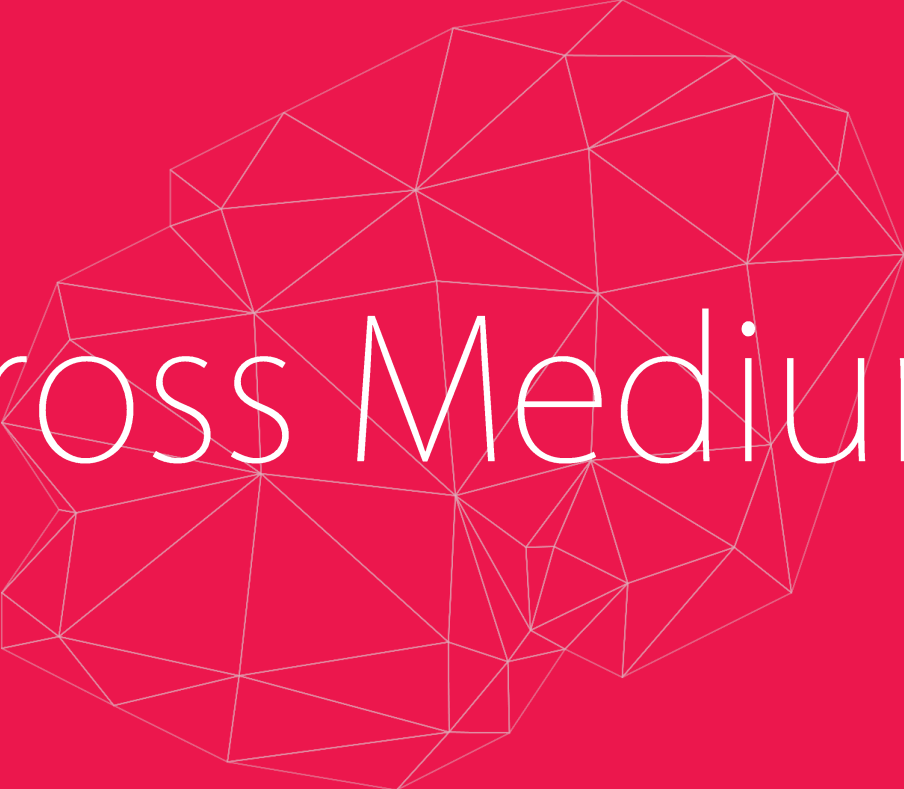


Social VR





VR Stars



Cross Medium



PRESIDENTIAL DEBATE★

NBC NEWS LIVE

W 49 ST

ROCKEFELLER PLAZA

DEMOCRACY PLAZA

Lucy

Michael



Local Multiplayer

Kimberly Voll

Fantastic Contraption





Social Presence

Nick Fajt
RecRoom





University of Vienna

Real-life prosocial behavior decreases after being socially excluded by avatars, not agents.





Especially introverts can easily forge friendships in VR

Percent of participants who wanted to be friends after meeting in virtual reality



Extroverts



57%

Introverts



83%

Facebook IQ Source: "Social Interaction in VR" by Neurons Inc. (Facebook-commissioned study of 60 people ages 18-51 in the US), Oct 2016.

<https://insights.fb.com/2017/01/09/how-virtual-reality-facilitates-social-connection/>



Create an avatar simply, with endless possibilities





Agency Avatars Agents

Who are you?

Justin Achilli

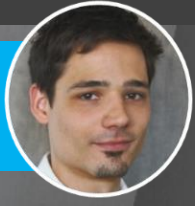
Werewolves Within



Social Inhibition of Return with Virtual Agents



Carolin Wienrich
University Würzburg



Felix Kretschmer
TU Berlin



Jay Posey

Star Trek: Bridge Crew





Async Multiplayer



Location Based



Sebastian Kreutz
HoloCafe



Oliver Eberlei
HoloCafe

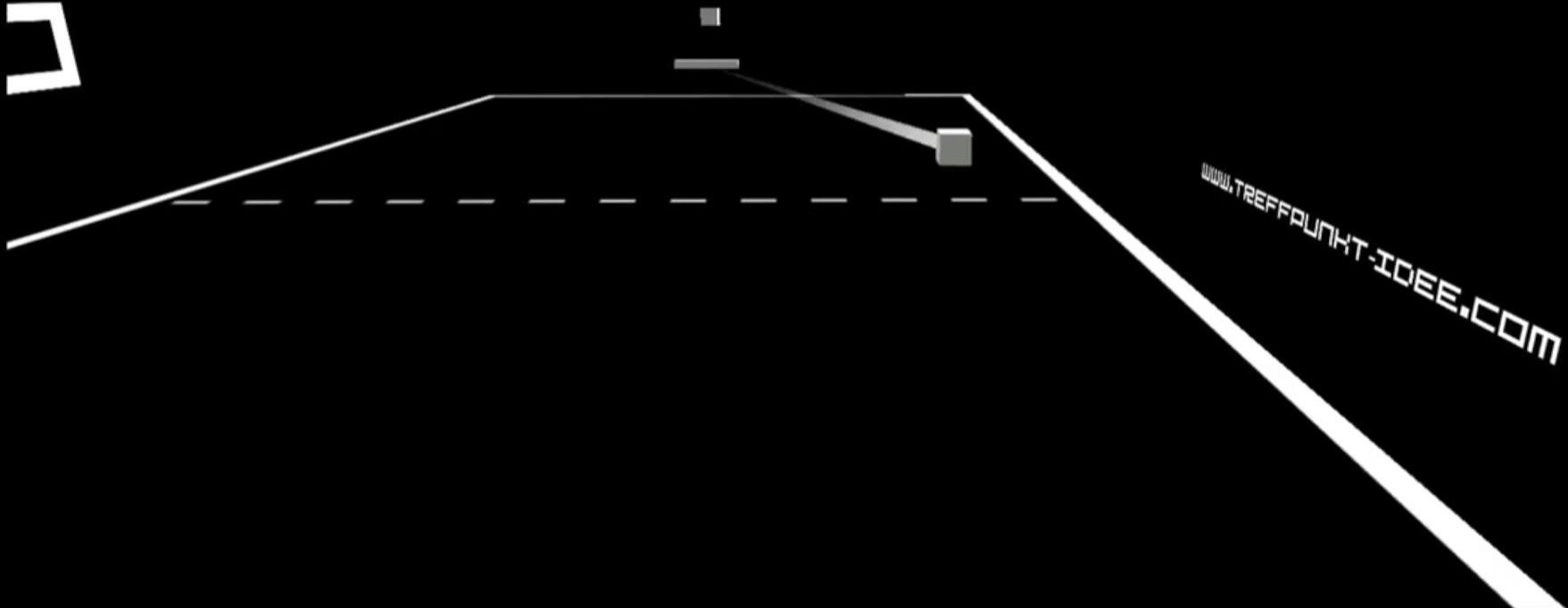


Jonathan Nowak Delgado

HolodeckVR



IE



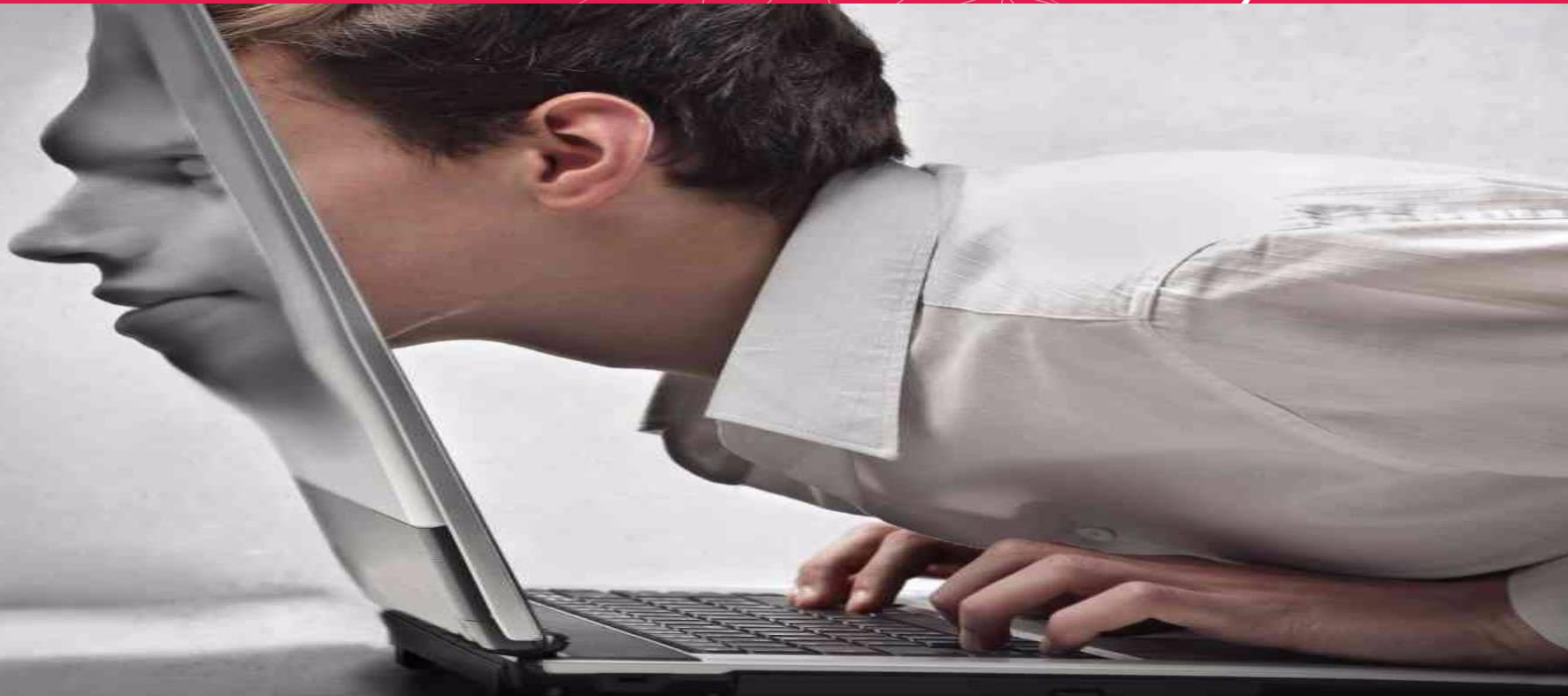
www.treffpunkt-idee.com

5D
Attraction





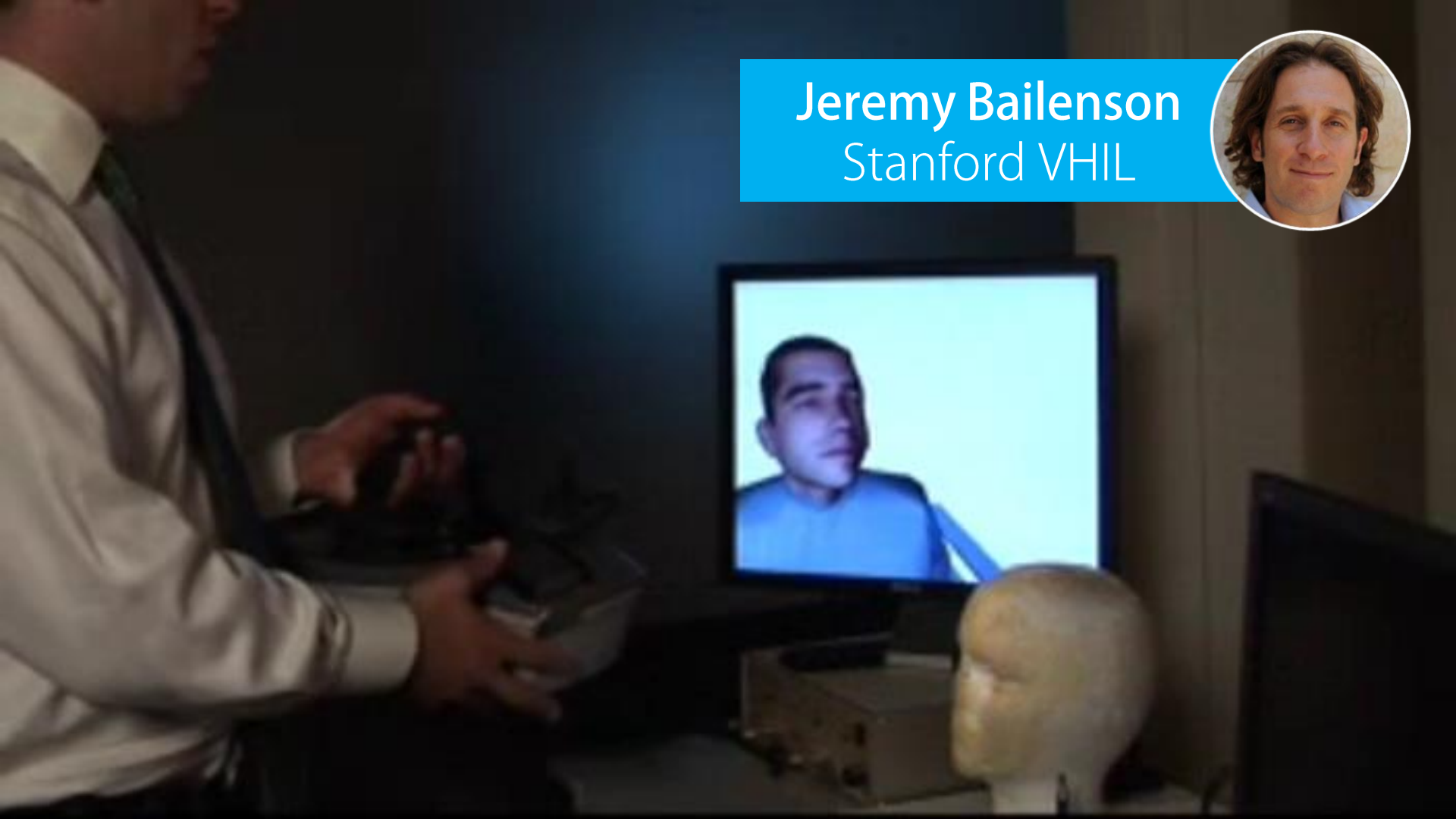
Facial Tracking





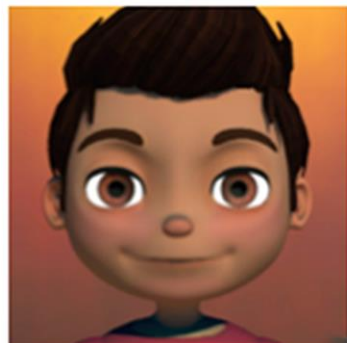


Jeremy Bailenson
Stanford VHIL



Effects of Enhancing Facial Expressions in Virtual Environments

Normal Smile Condition



Accurate representation
of smiling behavior

Enhanced Smile Condition



Enhanced representation
of smiling behavior

Mouth Open-Close Condition



Slight smile regardless
of smiling behavior

Cyril Tushi
Vonderland





Daydream Labs





Societal Impact

Roy Taylor
AMD



My mother says to me:
"Roy, will you give me a VR headset for Christmas?"

My mother is 72 years old. I said:
"Sure. What do you want it for?"

She says, "In VR, Roy, I can be young again."



0
EVENTS
AND C
WITH

ACCEPT MUM'S
INVITATION TO READ
A STORY?

HOW IT WORKS
EXPLORE MORE
RECONNECT

Episodic memory

Psychology

Design

VR

Iterative Approach

Technology

Emotional
Meaningful
Magical

Presence Agency Social



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exozet



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Tuesday, Feb. 28th, 2:10 pm

Room 134, North Hall, Moscone Center

