

SIGGRAPH 2018: Virtual, Augmented and Mixed Reality - Village English

Produced by: *Leona Caffey (SIGGRAPH, Smithbucklin)*

Provided by: *Pol Jeremias (SIGGRAPH 2018 Virtual, Augmented and Mixed Reality Chair)*

1000 Cut Journey

Achieving racial justice requires that we understand racism. One may support beliefs of racial justice and equality, but fail to truly understand the nature of racial inequality. In this immersive virtual reality experience, the viewer becomes Michael, a black man, encountering racism as a young child, adolescent, and young adult.

Courtney D. Cogburn
Columbia University

Jeremy Bailenson
Elise Ogle
Tobin Asher
Stanford University

Teff Nichols
The Jewish Board Child Development Center

Aeronaut

“Aeronaut” is one of the first music experiences to feature a hologram created with Microsoft Mixed Reality Capture. This technology was used to capture Billy Corgan’s performance in volumetric video. In this experience the users are able to connect with the artist and interact with the world around them.

Bryan Collinsworth, Karen Singer, Yan Xuan Justin Ou Yang, Tomonari Michigami, David Shiyang Liu,
Rob Ruffler
Viacom

Julie Huynh, Ken Waagner, Dave Meeker, Geoff Cubitt
Isobar

Danny Bittman
Viacom

AnimVR

"AnimVR" allows users to animate, integrate and share animated assets in Virtual Reality, revolutionizing traditional 3D content production. In AnimVR we leverage the possibilities of VR to enhance the CG Animation pipeline both by translating traditional animation workflows to VR as well as by exploring new ways to tell stories.

Dario Seyb, Milan Grajetzki
NVRMIND IVS

Grace Chin, Sasha Wilkinson
University of Massachusetts Lowell

Augmented Reality Game with Unique Semi-Transmissive Rendering Method

Augmented Reality Game with Unique Semi-Transmissive Rendering Method is an AR game project that introduces unique non-photorealistic & real-time rendering methods developed to enhance optical consistency. In this way, a seamless blending of virtual and physical content on mobile devices is achieved.

The player can move about freely and perform various actions by using wireless controllers with muscle displacement sensor. This game is also multiplayer compatible (WIP).

Daiki Taniguchi
Akatsuki Inc.

Augmented Reality Task Guidance for International Space Station Stowage Operations

The Augmented Reality Task Guidance for International Space Station Stowage Operations called **StowageApp** is a prototype for the future of conducting cargo operations in space. It has been built at NASA Johnson Space Center (JSC) and Columbia University, and tested in JSC's full-scale mockup of the International Space Station (ISS).

StowageApp dynamically guides astronauts as they complete stowage tasks, packing and unpacking cargo.

Hiroshi Furuya
Columbia University

Lui Wang
NASA

Carmine Elvezio, Steven Feiner
Columbia University

BroadcastAR

BroadcastAR is Xava Fragoso's large scale, interactive cinematic augmented reality experience. Viewers have the power to gesture control the movement of characters within their experience, creating vibrant

crowd engagement. The BroadcastAR platform has been installed on both indoor and outdoor LED/projected systems, ranging from retail to museums.

Xava Fragoso
INDE R&D

Chorus

Chorus transforms the players into fantastical female warriors in this social virtual reality experience. Six people can band together to battle evil in this epic journey of empowerment, all orchestrated to the song "Chorus" by Justice.

Adam Rogers
Gentle Manhands

Collaborative Exploration of Urban Data in Virtual and Augmented Reality

From emergency planning to real estate, many domains can benefit from collaborative exploration of urban environments in VR and AR. Carmine Elvezio and team have created an interactive experience that allows multiple users to explore live datasets in context of an immersive scale model of the urban environment with which they are related.

Carmine Elvezio, Frank Ling, Jen-Shuo Liu
Columbia University

Barbara Tversky
Teachers College

Steven Feiner
Columbia University

Coral Vr

Coral is an interactive Fractal explorer. The attendees can dive into the procedural art piece to enjoy the power and beauty of mathematics visualized in virtual reality. It was initially a passion project at framestore that is now in its public beta version.

Johannes Saam
Framestore

Cycles

Cycles is a VR short film centered around the true meaning of creating a home and the life it holds inside it's walls.

Jeff Gipson
Disney Animation Studios

Demonstration of Gaze-Aware Video Streaming Solutions for Mobile VR

This demo features Smart Eye-tracking Enabled Networking, known as SEEN, which is a novel content delivery method for optimizing 360-video streaming. SEEN relies on eye-gaze information from novel 5G-networked eye-trackers to stream high-quality, in real-time, only in proximity of fixations points. SEEN technology is developed in a joint project between KTH, Tobii and Ericsson.

Pietro Lungaro, Firdose Saeik, Konrad Tollmar
Royal Institute of Technology - KTH

ELI in VR: Embodied Limbic Interaction for Piloting a Virtual Hang-Glider

ELI in VR is a head-mounted display, a stationary control bar, and a limbic chair allow for a user to pilot a hang-glider in VR.

Kenan Bektaş
University of Zurich and ETH Zurich; ZHAW, Zurich

Mark Adriaan van Raai
Limbic Life AG

Tyler Thrash
University of Zurich and ETH Zurich

Patrik Künzler
Limbic Life AG

Richard Hahnloser
University of Zurich and ETH Zurich

Elastic Time

Elastic Time is a mixed reality documentary about space-time narrated by astronomer Tony Stark. Your own holographic body is captured and integrated in real time into a telescope room. You bend space and time to your will, creating black-holes, worm-holes and time portals. This volumetric documentary is powered by IMVERSE proprietary voxel-based graphics engine.

Javier Bello Ruiz, Robin Mange
Imverse SA

Mark Boulos
VCUarts

Fire Escape: An Interactive Series

When the clock strikes eight in Brooklyn, a suspenseful drama begins to unfold in real time—where you can interact and peer into the private lives of eight disenfranchised tenants entangled in a murder. In

“Fire Escape” audiences must embrace their voyeuristic tendencies in this rich and unique interactive series—to reveal a gripping truth.

Vassiliki Khonsari, Navid Khonsari, Andres Perez-Duarte, Sam Butin
iNK Stories

IKEA Immerse Interior Designer

IKEA Immerse is available in selected IKEA stores in Germany. This application enables consumers to create, experience and share their own configurations in a virtual living and kitchen room set. With seamless ecommerce integration, a high level of detail and real-time interaction, the VR experience represents an engaging, valuable touchpoint.

Tobias Soffner, Florian Gläser
Demodern GmbH

Multiplayer Augmented Reality: The Future is Social, Presented by Niantic

The software development company Niantic takes AR to the next level by enabling multiple mobile devices to experience the same AR objects in real-time!

Watch people play pong against each other, where the ball and paddles exist in AR for all users. Shared AR experiences is essential for keeping AR mainstream in the future.

Si ying Diana Hu
Niniane Wang
Niantic, Inc.

Queerskins: A Love Story

In the haptic cinematic VR experience “Queerskins: a love story”, a diary and a box of belongings offers you and a devoutly Catholic mother living in rural Missouri in 1990 a chance to know Sebastian, the estranged son she has lost to AIDS. How will you choose to reconstruct him and his life?

Illya Szilak
Fancy Rainbow

Cyril Tsiboulski
Cloudred

Sherpa - The Helping Hands of the Himalaya

In “Sherpa” four players start a journey helping their tourists climb a mountain. During the game, they receive support from real Sherpas, one of the major ethnic groups native to the most mountainous regions of Nepal, who also tell stories about their daily life. A journey about exploring and getting to know the local culture, on a plexiglass installation combining VR technology and projection mapping.

Dimosthenis Gkantzos
Christian Greitmann
Martin Koegel
Filmakademie Baden-Wuerttemberg GmbH

The AI Powered Magic Mirror: Building Immersive AR/VR Experiences with Only Webcams and Deep Learning

This magic mirror uses AI to teach webcams to read human body language. The mirror enables people to walk up to ordinary TV monitors and beamed into cyberspace. From this digitization, users can see themselves as a variety of avatars including a virtual motion capture artist and digital chicken.

Paul Kruszewski
Thomas Jan Mahamad
wrnch

VIVO Lifelike Reactive Characters for VR

Characters are the true soul of any story. Using their proprietary tech VIVO, *ESTUDIOFUTURE* creates VR characters who are not only believable but amazingly responsive and real. VIVO turns character interactions into powerfully immersive, natural experiences. Designed from the ground up to build the next-gen VR movies and games.

Joaquin Ruiperez, Gonzalo Ruiperez
ESTUDIOFUTURE

Voyage

Voyage is a multiuser mobile virtual reality (VR) experience for Google Daydream that allows students to go on virtual field trips in which they immersively explore a deciduous forest biome. The experience is designed to be undertaken in a middle-school classroom and facilitated by a teacher using a tablet computer.

Sharan Shodhan, Julian Korzeniowsky, Rajeev Mukundan, Na-yeon Kim, Sijja He
Carnegie Mellon University

Mark J.W. Lee
Charles Sturt University

We AR Sight: An Open Source Augmented Reality Wearable Device to Assist Visually Impaired Individuals

As the field of Wearable Computing and Augmented Reality progressed, very few inexpensive solutions to augment the reality of the visually impaired have been witnessed. Nerkar and Gurjar present “We AR Sight”, an interactive demonstration of open-source augmented reality wearable device that assists visually impaired individuals by providing them with smart vision via auditory feedback.

Sarang Nerkar, Ambarish Gurjar
Innosapien Technologies Pvt. Ltd., Nerkar Education and Research Trust

Welcome to Light Fields

Light Fields let us experience freedom of motion and realistic reflections and translucence like never before in VR. Explore the Gamble House, Mosaic Tile House, and Space Shuttle Discovery. These navigable light field stills showcase the emerging technology Google is using to power its next generation of VR content.

Ryan S. Overbeck, Daniel Erickson, Daniel Evangelakos, Paul Debevec
Google Inc.

Tales of the Wedding Ring

Square Enix is creating a VR specific format for Japanese manga storytelling. Their first title, "Tales of Wedding Rings" utilizes "LiveWindow" technology to replicate the look and feel of manga frame based storytelling, and allows the user to literally "step inside the story."

Kaei Sou
Square Enix Co., Ltd.