

Dimitri Gielis

Bringing Virtual Reality (VR) and Augmented Reality (AR) to APEX

www.apexRnD.be
dgielis.blogspot.com
@dgielis
dgielis@apexRnD.be

arvr.apexrnd.be

arvr.apexrnd.be

Dimitri Gielis



- Founder & CEO of APEX R&D
- 20+ years of Oracle Experience (OCP & APEX Certified)
- Oracle ACE Director
- “APEX Developer of the year 2009” by Oracle Magazine
- “Oracle Developer Choice award (ORDS)” in 2015
- Author Expert Oracle APEX
- Presenter at Conferences

APEX R&D
research & development

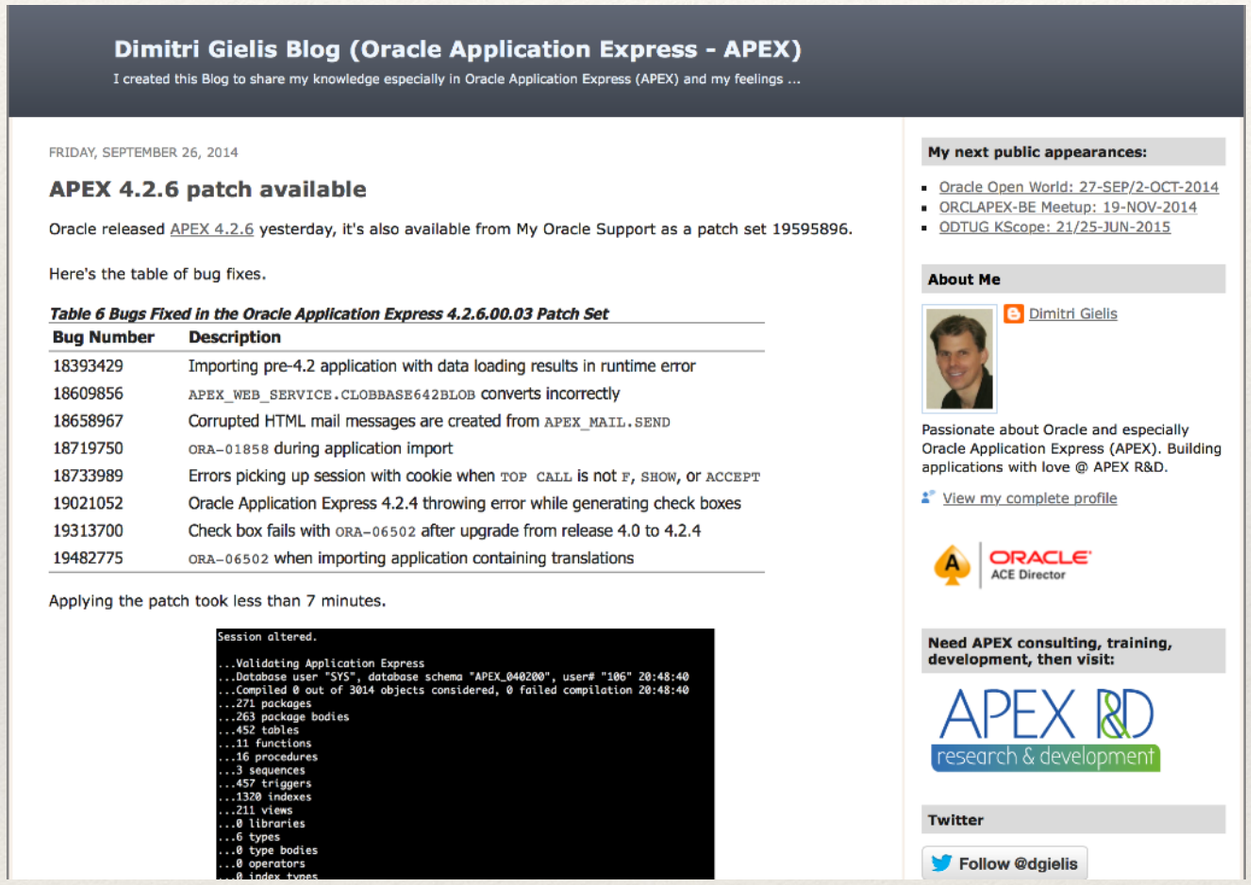


www.apexRnD.be

www.apexofficeprint.com

http://dgielis.blogspot.com

@dgielis



Dimitri Gielis Blog (Oracle Application Express - APEX)

I created this Blog to share my knowledge especially in Oracle Application Express (APEX) and my feelings ...

FRIDAY, SEPTEMBER 26, 2014

APEX 4.2.6 patch available

Oracle released APEX 4.2.6 yesterday, it's also available from My Oracle Support as a patch set 19595896.

Here's the table of bug fixes.

Table 6 Bugs Fixed in the Oracle Application Express 4.2.6.00.03 Patch Set

Bug Number	Description
18393429	Importing pre-4.2 application with data loading results in runtime error
18609856	`APEX_WEB_SERVICE.CLOBBASE642BLOB` converts incorrectly
18658967	Corrupted HTML mail messages are created from `APEX_MAIL.SEND`
18719750	`ORA-01858` during application import
18733989	Errors picking up session with cookie when `TOP CALL` is not `F`, `SHOW`, or `ACCEPT`
19021052	Oracle Application Express 4.2.4 throwing error while generating check boxes
19313700	Check box fails with `ORA-06502` after upgrade from release 4.0 to 4.2.4
19482775	`ORA-06502` when importing application containing translations

Applying the patch took less than 7 minutes.

```
Session altered.

...Validating Application Express
...Database user "SYS", database schema "APEX_040200", user# "106" 20:48:40
...Compiled 0 out of 3014 objects considered, 0 failed compilation 20:48:40
...271 packages
...263 package bodies
...452 tables
...11 functions
...16 procedures
...3 sequences
...457 triggers
...1320 indexes
...211 views
...0 libraries
...6 types
...0 type bodies
...0 operators
...0 index types
```

My next public appearances:

- Oracle Open World: 27-SEP/2-OCT-2014
- ORCLAPEX-BE Meetup: 19-NOV-2014
- ODTUG KScope: 21/25-JUN-2015

About Me

Dimitri Gielis

Passionate about Oracle and especially Oracle Application Express (APEX). Building applications with love @ APEX R&D.

View my complete profile

ORACLE ACE Director

Need APEX consulting, training, development, then visit:

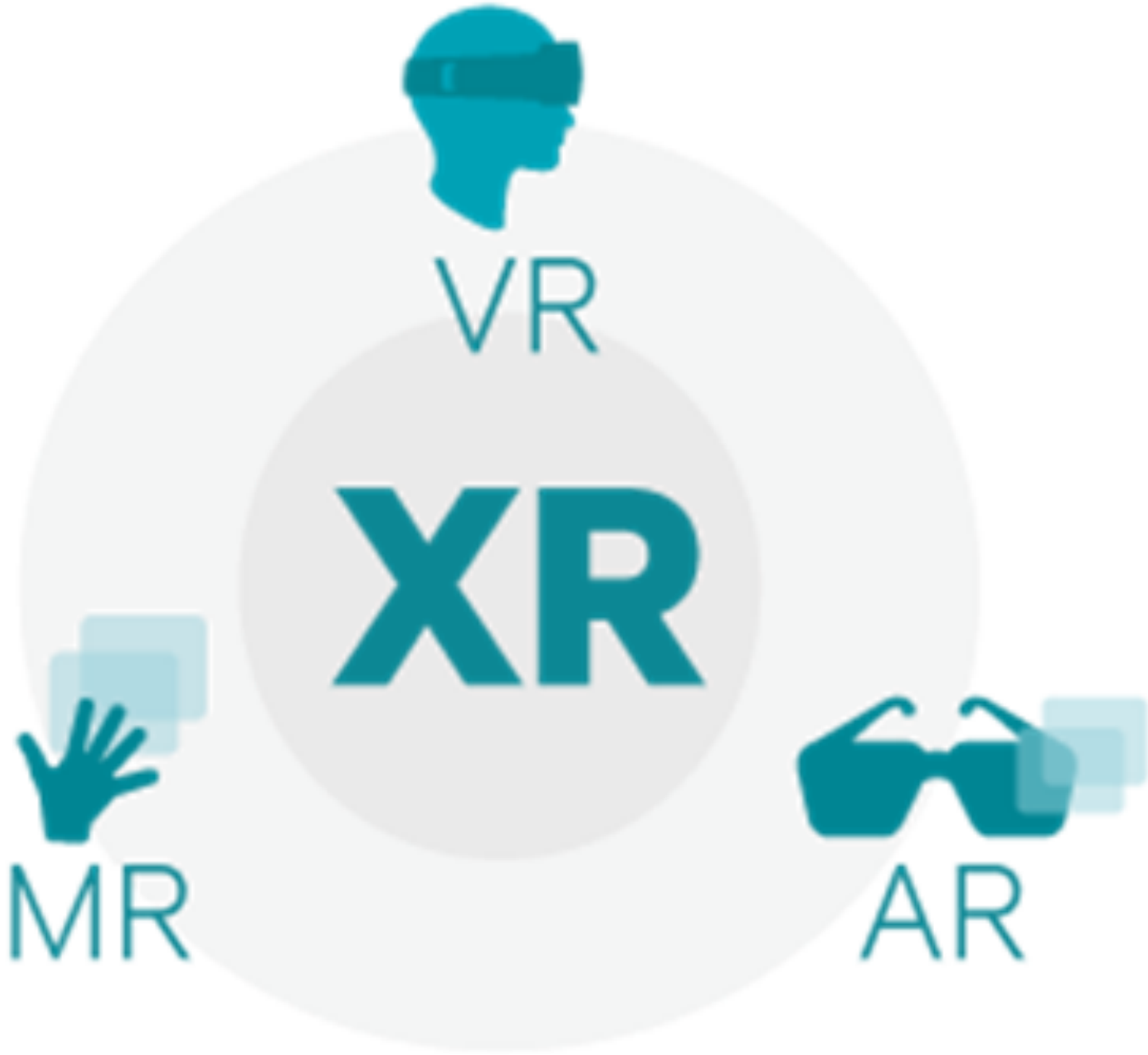
APEX R&D research & development

Twitter

Follow @dgielis

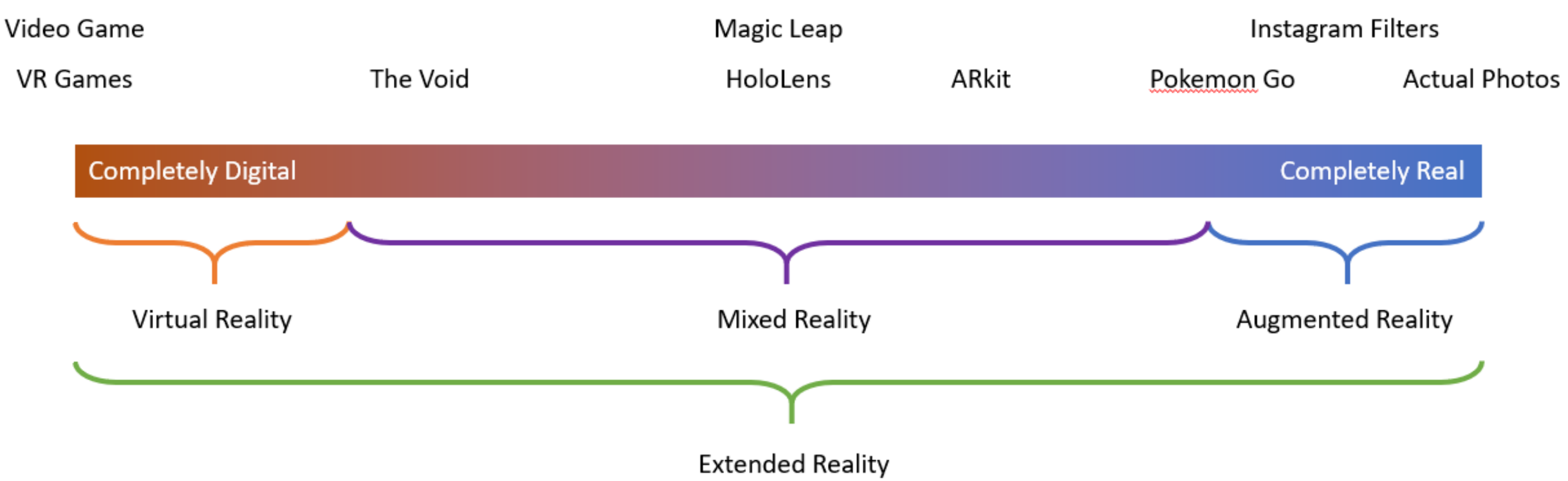


What is VR / AR / XR / MR?



https://medium.com/@northof41/what-really-is-the-difference-between-ar-mr-vr-xr-35bed1da1a4e

Reality-Virtuality Spectrum



https://hackernoon.com/the-difference-between-ar-vr-mr-xr-and-how-to-tell-them-apart-45d76e7fd50

Virtual Reality (VR)

“the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.”

–Google

Use Cases - VR

Healthcare



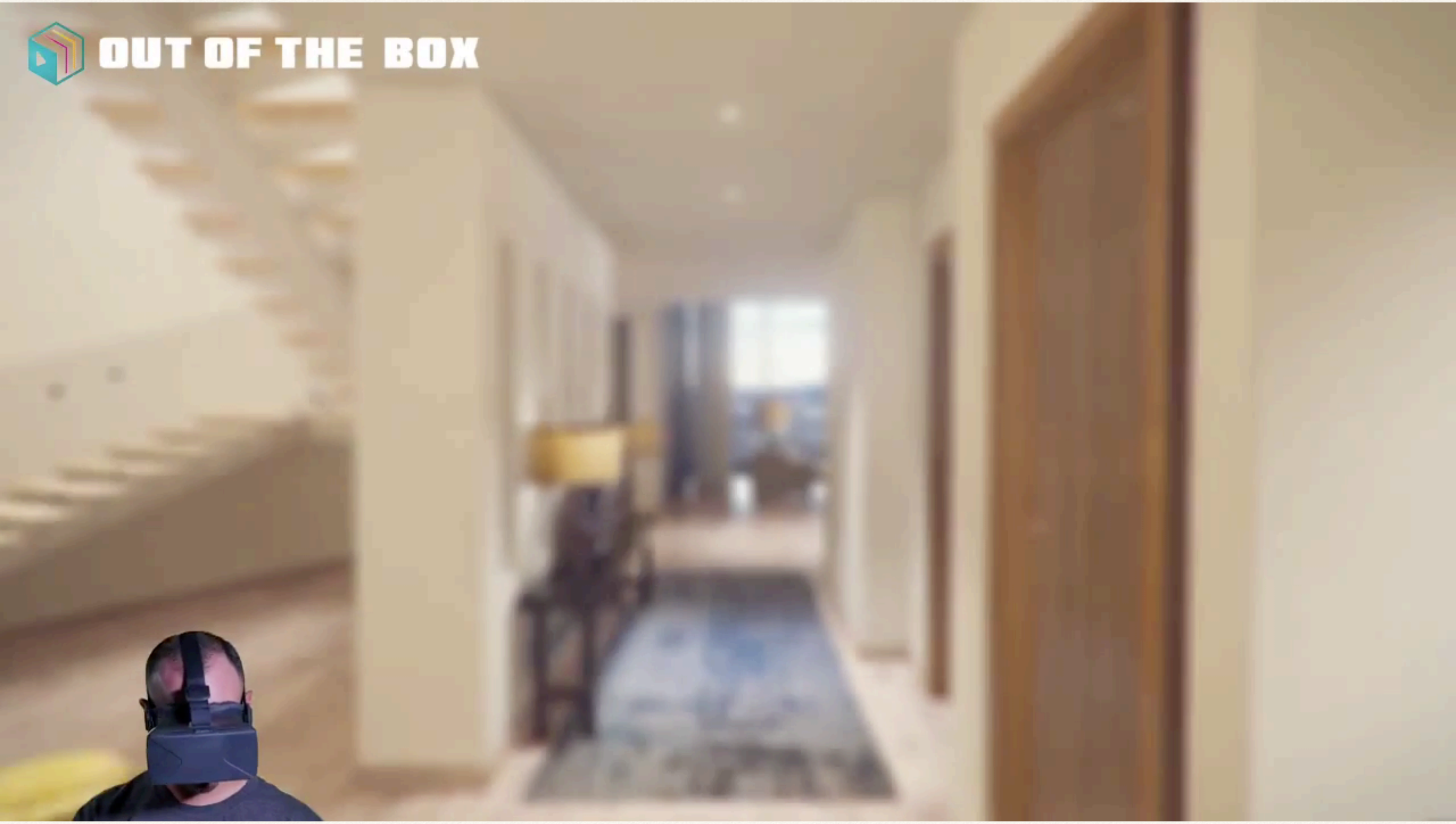
Military



Marketing



Architecture



Virtual Reality Games



Virtual Reality Games



TESLASUIT

Announcing the global launch of the Teslasuit at CES 2018



Augmented Reality (AR)

“a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view”

–Google

Types of AR

- **Marker and Markerless AR**
  - e.g. QR codes (marker), location (markerless)
- **Layered AR**
  - e.g. virtual clothes, furniture in house, navigation
- **Projection AR**
  - e.g. hologram, projected keyboard

https://www.lifewire.com/augmented-reality-ar-definition-4155104

Use Cases - AR

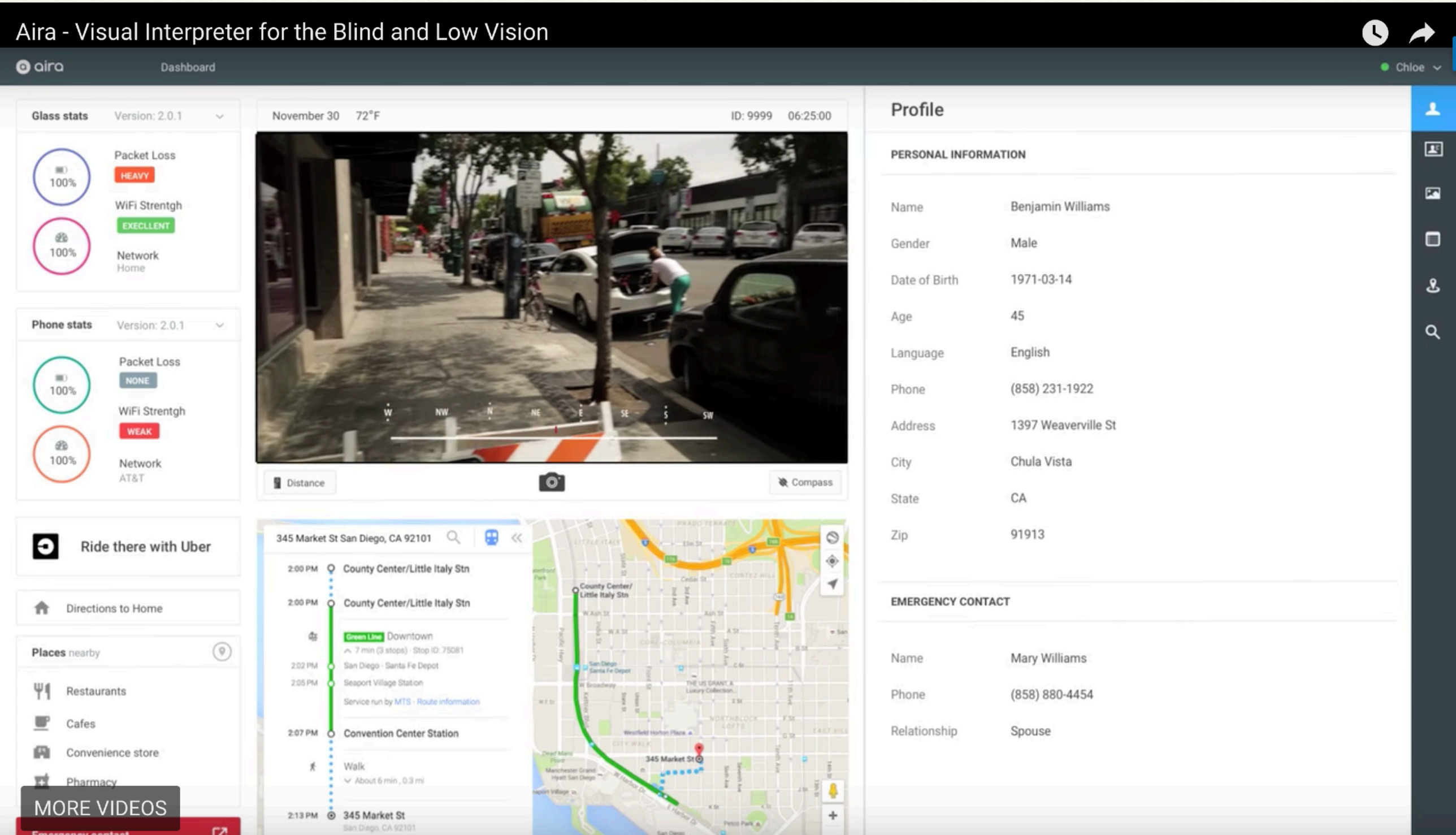
Retail



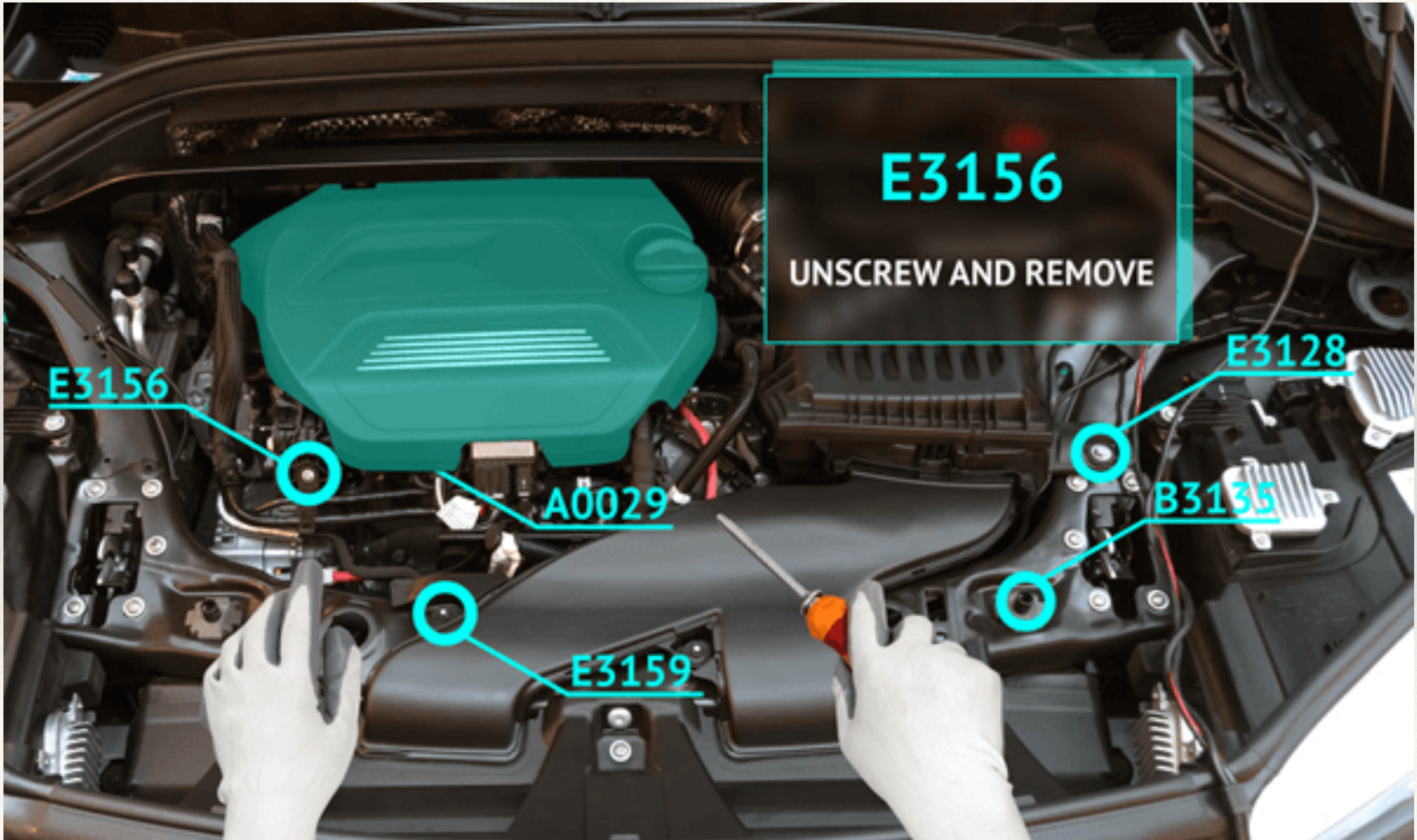
Architecture



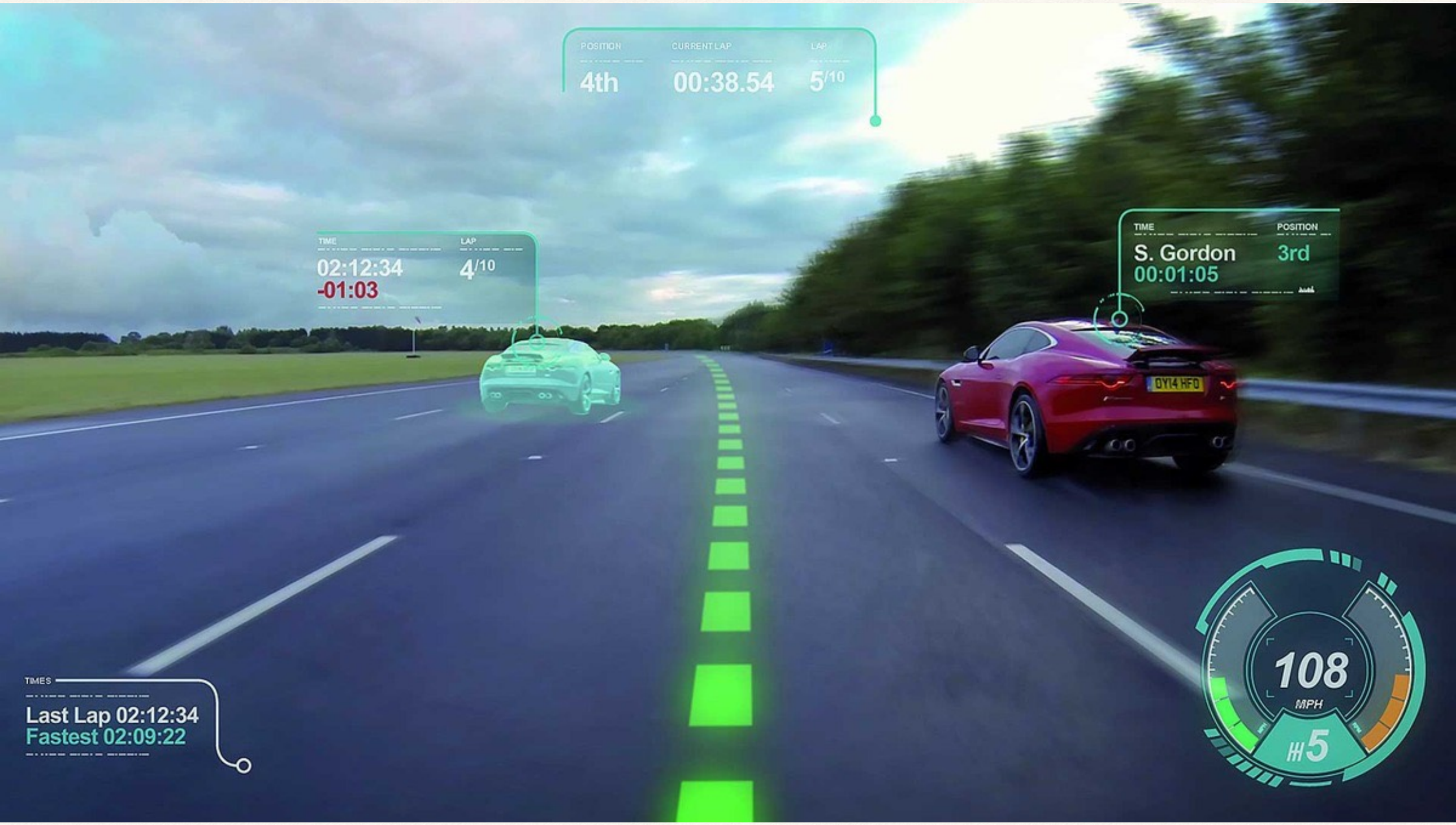
Healthcare


Aira - Visual Interpreter for the Blind and Low Vision
aira
Dashboard
Chloe
Glass stats
Version: 2.0.1
100%
Packet Loss
HEAVY
WiFi Strentgh
EXECLLENT
100%
Network
Home
Phone stats
Version: 2.0.1
100%
Packet Loss
NONE
WiFi Strentgh
WEAK
100%
Network
AT&T
Ride there with Uber
Directions to Home
Places nearby
Restaurants
Cafes
Convenience store
Pharmacy
MORE VIDEOS
November 30 72°F
ID: 9999 06:25:00
W NW N NE E SE S SW
Distance
Compass
345 Market St San Diego, CA 92101
2:00 PM County Center/Little Italy Stn
2:00 PM County Center/Little Italy Stn
Green Line Downtown
7 min (3 stops) · Stop ID: 75081
2:02 PM San Diego · Santa Fe Depot
2:05 PM Seaport Village Station
Service run by MTS · Route information
2:07 PM Convention Center Station
Walk
About 6 min , 0.3 mi
2:13 PM 345 Market St
San Diego, CA 92101
County Center/ Little Italy Stn
345 Market St
Profile
PERSONAL INFORMATION
Name Benjamin Williams
Gender Male
Date of Birth 1971-03-14
Age 45
Language English
Phone (858) 231-1922
Address 1397 Weaverville St
City Chula Vista
State CA
Zip 91913
EMERGENCY CONTACT
Name Mary Williams
Phone (858) 880-4454
Relationship Spouse

Training / Assistance / Support



Car industry



Games



Military



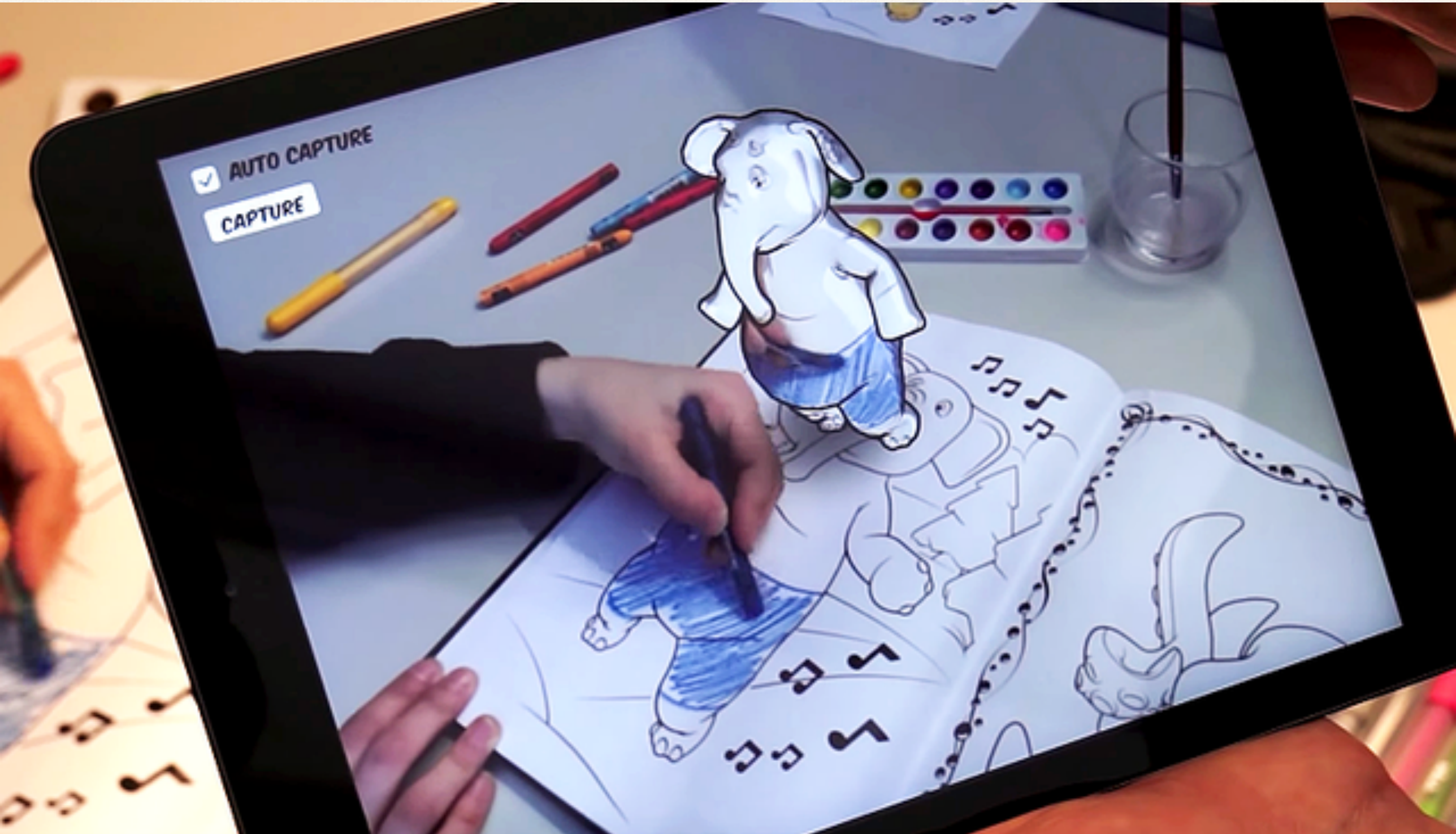
Lifestyle


MAKEUP
GENIUS
Start to makeup!
L'ORÉAL

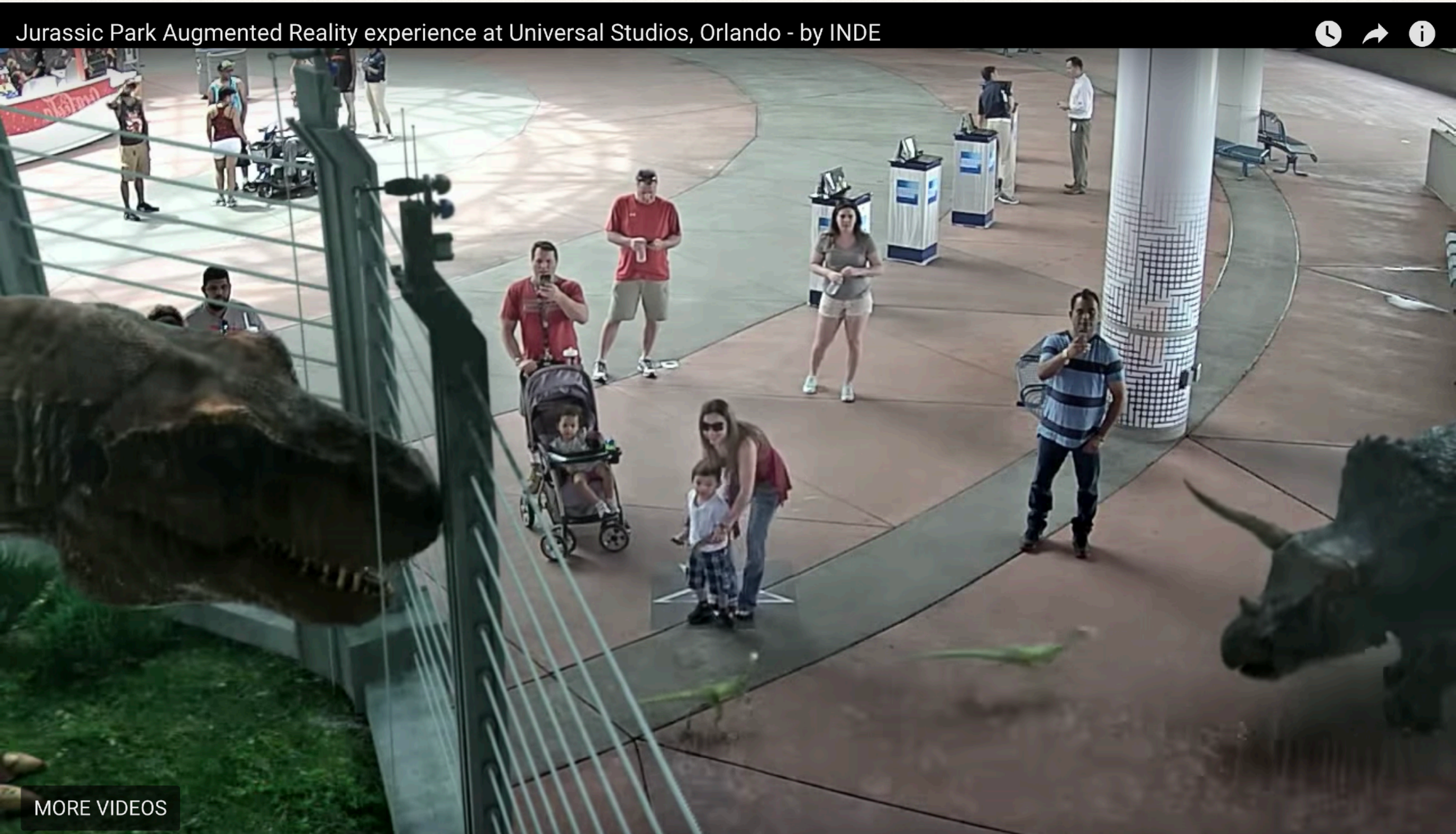

VOTRE LOOK
AJOUTER
CONTOUR DES
YEUX
AJOUTER
OMBRE À
PAUPIÈRES


VOTRE LOOK
ACHETER
SAUVEGARDER
INFO
SE DÉMAQUILLER

Education



Entertainment



Marketing



in Seattle

eventbrite

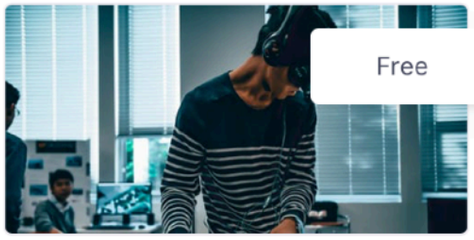
Browse Events Help Sign In

augmented reality virtual reality

in Seattle

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Any date More filters



Making Art in Virtual Reality

Sun, Aug 25, 2:30pm

Gallery 1412, Seattle, WA

Free

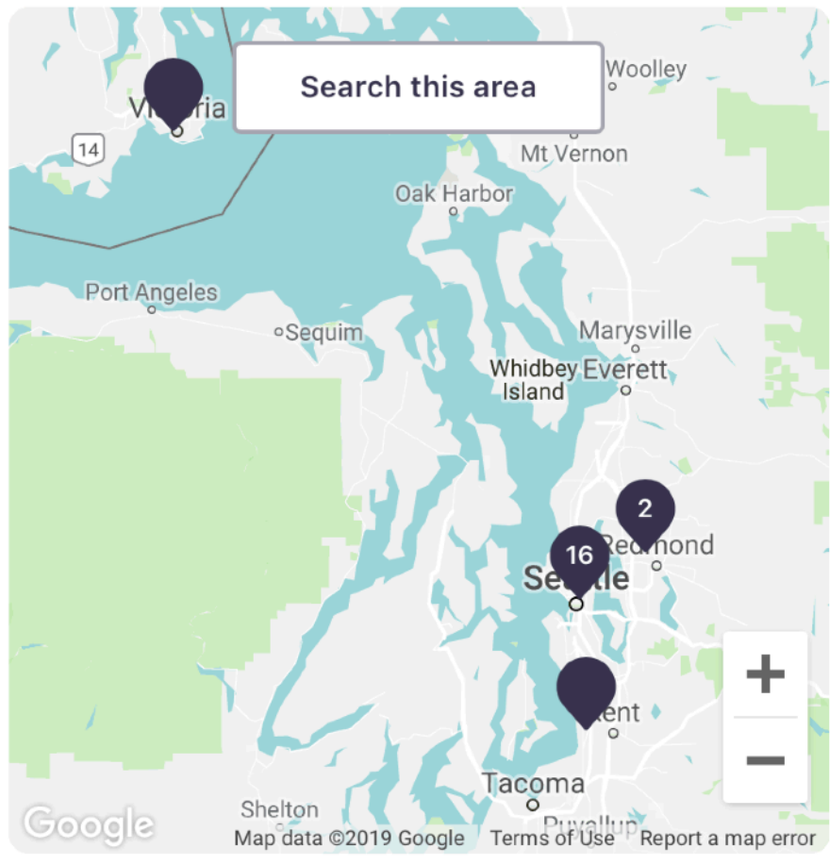


Virtual Bauhaus: A Virtual Reality Experience

Mon, Apr 15, 1:00pm

Goethe Pop Up Seattle, Seattle, WA

Free



Mixed Reality (MR)



New spacecraft



Magic Leap One™

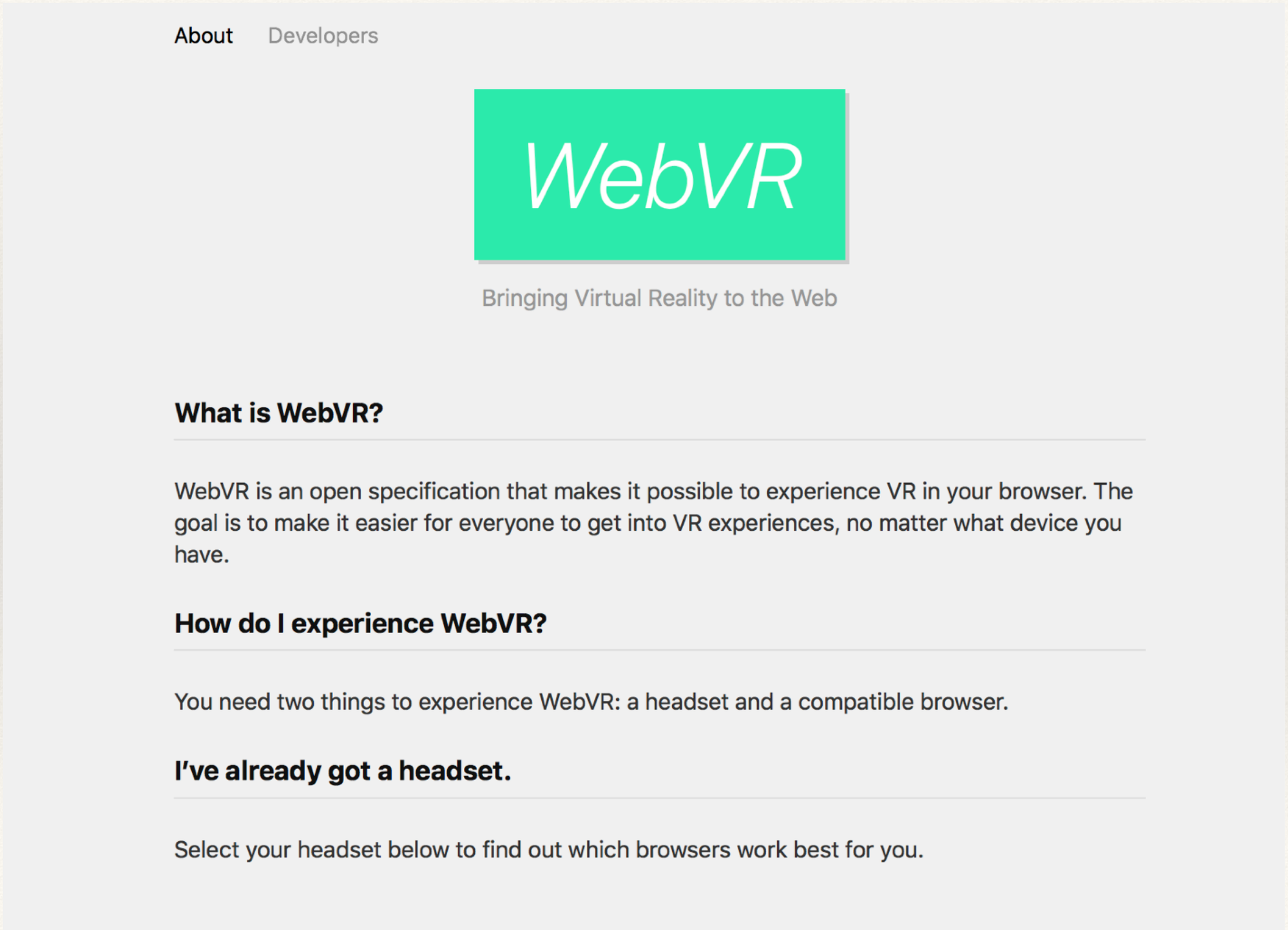
Creator Edition

We're adding another dimension to computing. Where digital respects the physical. And they work together to make life better. Magic Leap One is built for creators who want to change how we experience the world.

How to use it in a browser?

(JavaScript) Frameworks

webvr.info


About
Developers
WebVR
Bringing Virtual Reality to the Web
What is WebVR?
WebVR is an open specification that makes it possible to experience VR in your browser. The goal is to make it easier for everyone to get into VR experiences, no matter what device you have.
How do I experience WebVR?
You need two things to experience WebVR: a headset and a compatible browser.
I've already got a headset.
Select your headset below to find out which browsers work best for you.
Google Cardboard
Oculus Go

a-frame.io

A-FRAME

Blog

A Week of A-Frame 106 - 110

Examples

Hello WebVR

Hello Metaverse

360° Image

360° Image Gallery

360° Video

Animation

Anime UI

Audio Visualization

Lights

Shopping

Snowglobe

Tracked Controllers

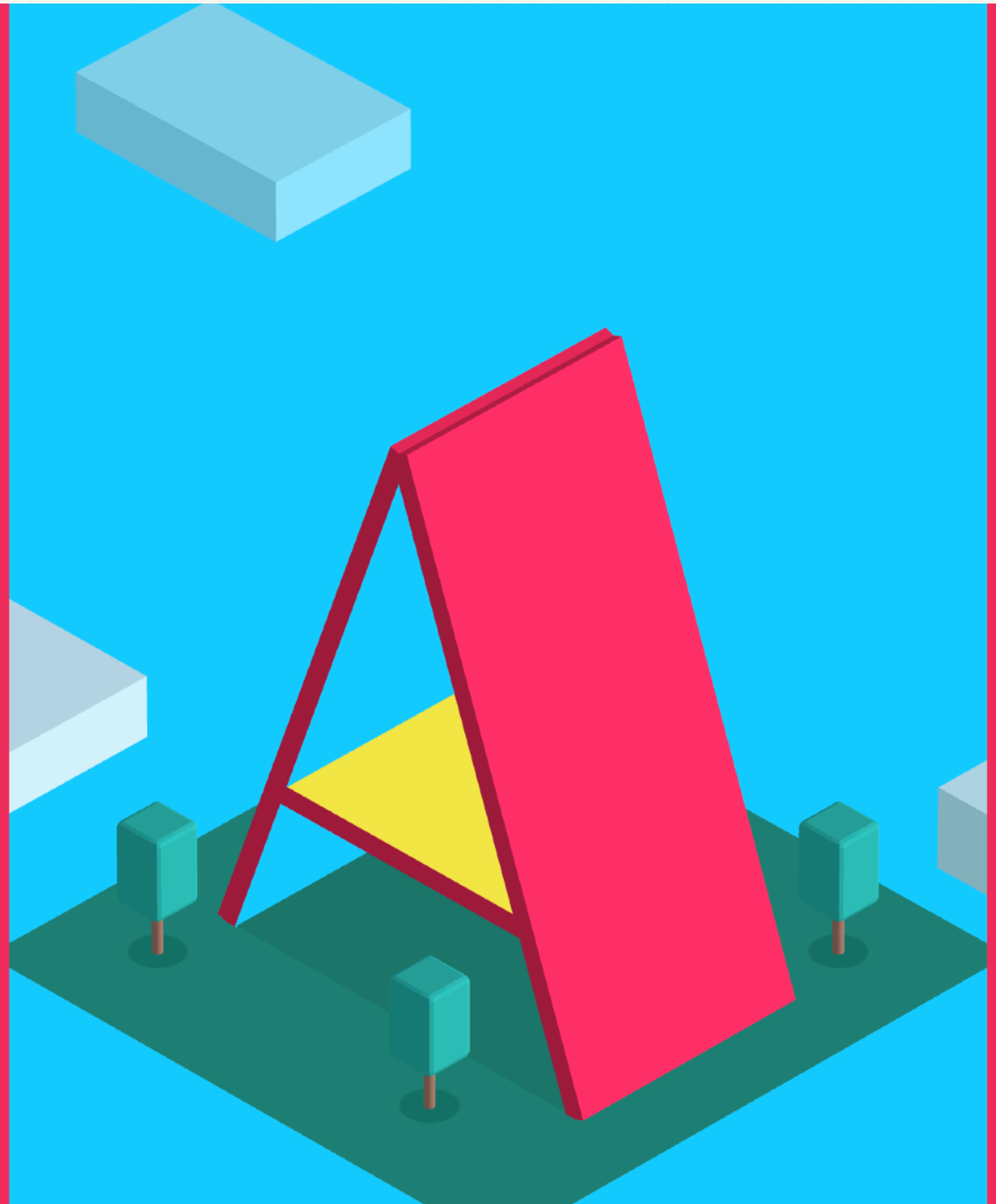
A-Blast

A-Painter

A Saturday Night

City Builder

Museum



DOCS FAQ BLOG COMMUNITY GITHUB

A web framework for building virtual reality experiences

Make WebVR with HTML and Entity-Component

Works on Vive, Rift, Daydream, GearVR, desktop

GET STARTED

threejs.org

three.js r93

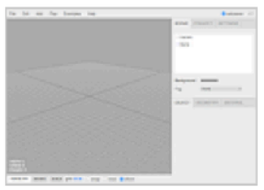
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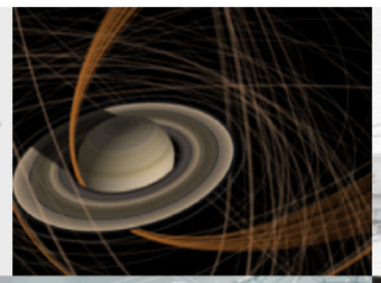




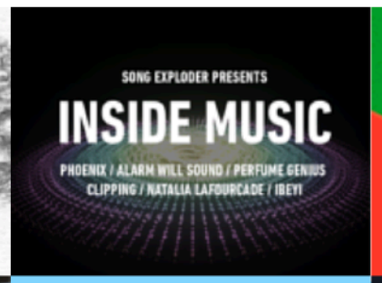


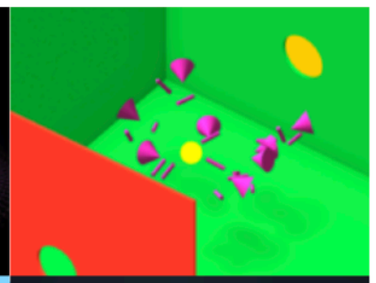




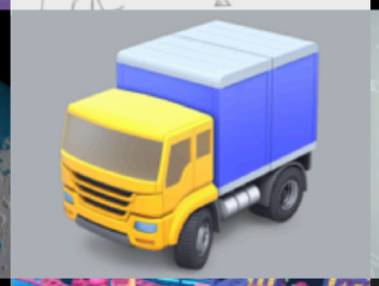










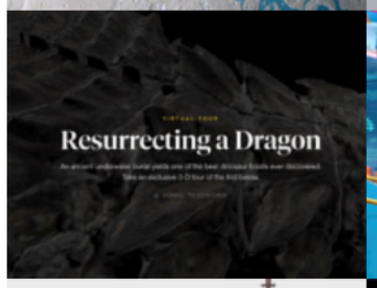




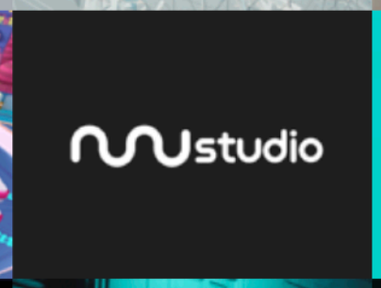


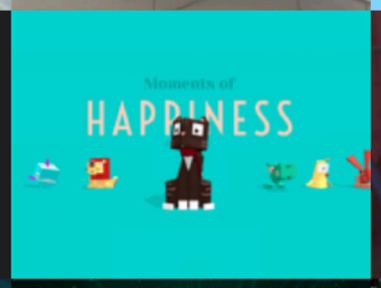




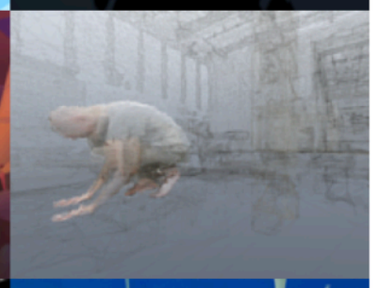






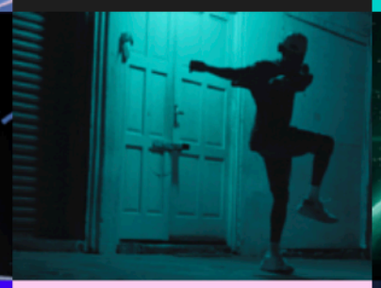






























argon.js

argon.js

A javascript framework for adding augmented reality content to web applications

Augmented reality (AR) is the idea of mixing computer-generated media (e.g., 3D objects, 2D content, spatialized audio) with someone's view of the real world. Whether you want to create a new AR application, or add an AR view to an existing web application, the argon.js framework provides a set of abstractions and utilities for adding an AR view to your web application in a platform- and technology-independent way.

argon.js was originally designed to take advantage of the augmented reality capabilities of the Argon AR-enabled web browser on iOS, simplifying the process of delivering mobile AR experiences without the need to create, ship and support native applications.

However, argon.js will also work with other web browsers, taking advantage of their capabilities to allow your application to deliver whatever kind of AR experience each browser is capable of. While the AR capabilities a most web browsers is currently minimal, they are improving rapidly, and argon.js is designed to support this evolution.

Want to dive and and start creating AR-enabled web applications? Check out the downloads below.

AR.js

jeromeetienne / **AR.js**

Watch 443 | Star 10,582 | Fork 1,095

Code | Issues 143 | Pull requests 29 | Projects 1 | Insights

Efficient Augmented Reality for the Web - 60fps on mobile!

a-frame | three-js | webar

950 commits | **10** branches | **8** releases | **17** contributors | MIT

Branch: **master** | New pull request | Find file | Clone or download

Jerome Etienne Last commit before release — Latest commit `0694b41` on May 2

aframe	Last commit before release	a month ago
data	integrating augmented-webpage in README.md	a year ago
test	added image to test patternRatio	a month ago
three.js	Last commit before release	a month ago
.gitignore	adds .gitignore	a year ago
.npmignore	remove heavy examples and demo data from npm package distribution	7 months ago
CHANGELOG.md	Last commit before release	a month ago
CONTRIBUTING.md	Created CONTRIBUTING.md	6 months ago

APEX Integration

Oracle APEX integration

- not that different than any other web integration
- JavaScript / Plugin
- Source: https://github.com/dgielis



Ed Jones

exjones

Block or report user

Oracle

Overview Repositories 7 Stars 6 Followers 1 Following 2

Popular repositories

lost-toys

A mobile app to help you find and befriend lost toys. An experiment with Oracle MAF and Estimote beacons.

Java ★ 1 2

apex-dataworld

An APEX application for building data-connected VR applications in a browser.

SQLPL ★ 1

apex-apexlens

APEX applications to easily build and deliver AR applications using only a browser.

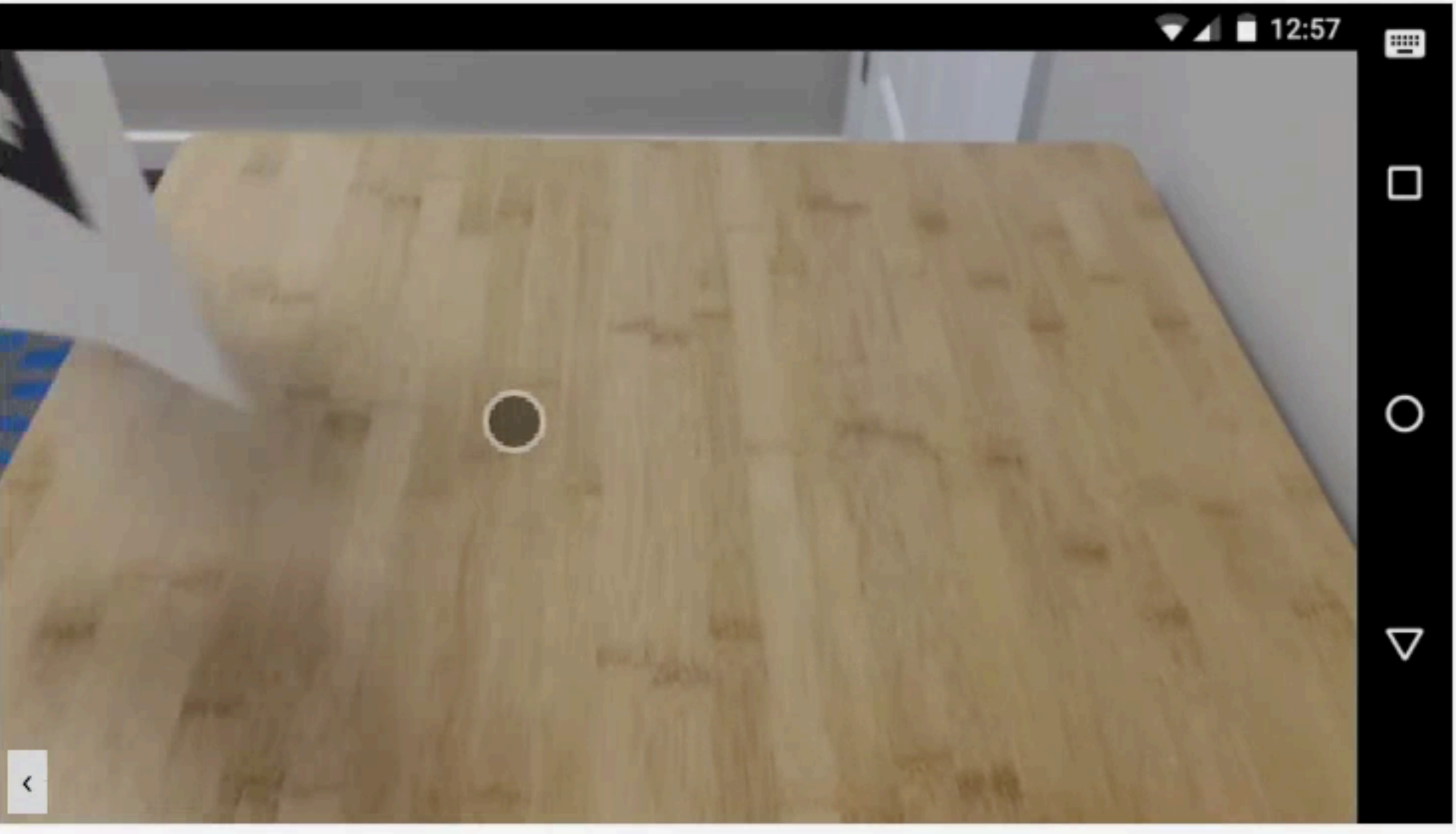
SQLPL ★ 1

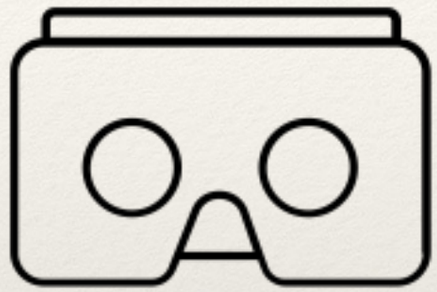
osn-hax

Browser-based extensions to the Oracle Social Network web client interface.

JavaScript

https://github.com/exjones


12:57



Demo

arvr.apexrnd.be

https://www.apexrnd.be/ords/f?p=ARVR:IMAGE_360





arvr.apexrnd.be



What we saw

- Demo
- What is VR / AR / MR => XR?
  - Use Cases
- How to use it in a browser?
  - (JavaScript) Frameworks
- APEX Integration

Learn more…

- https://github.com/googlevr/vrview
- https://veer.tv/videos/skydiving-brazil-163338
- https://appreal-vr.com/blog/10-augmented-reality-marketing-examples/
- http://www.lit-3d.com/en/virtual-reality
- https://www.foundry.com/industries/virtual-reality/vr-mr-ar-confused

Q&A

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research & development

www.apexRnD.be
dgielis.blogspot.com
@dgielis
dgielis@apexRnD.be

Consulting, Development, Training

- Looking for consulting, training and development in Oracle Application Express (APEX)?
- Contact : www.apexRnD.be
- Mail : info@apexRnD.be