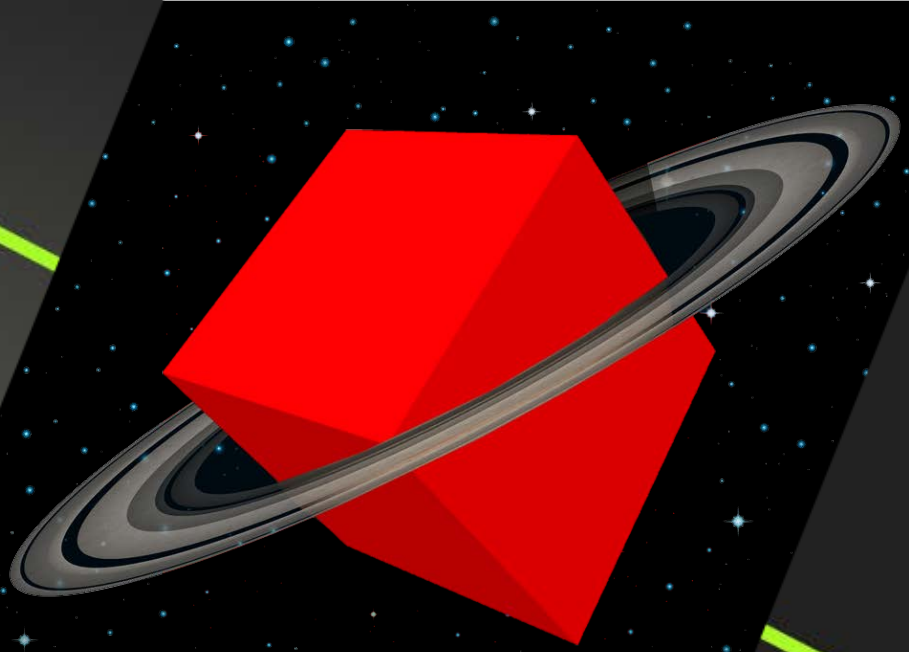
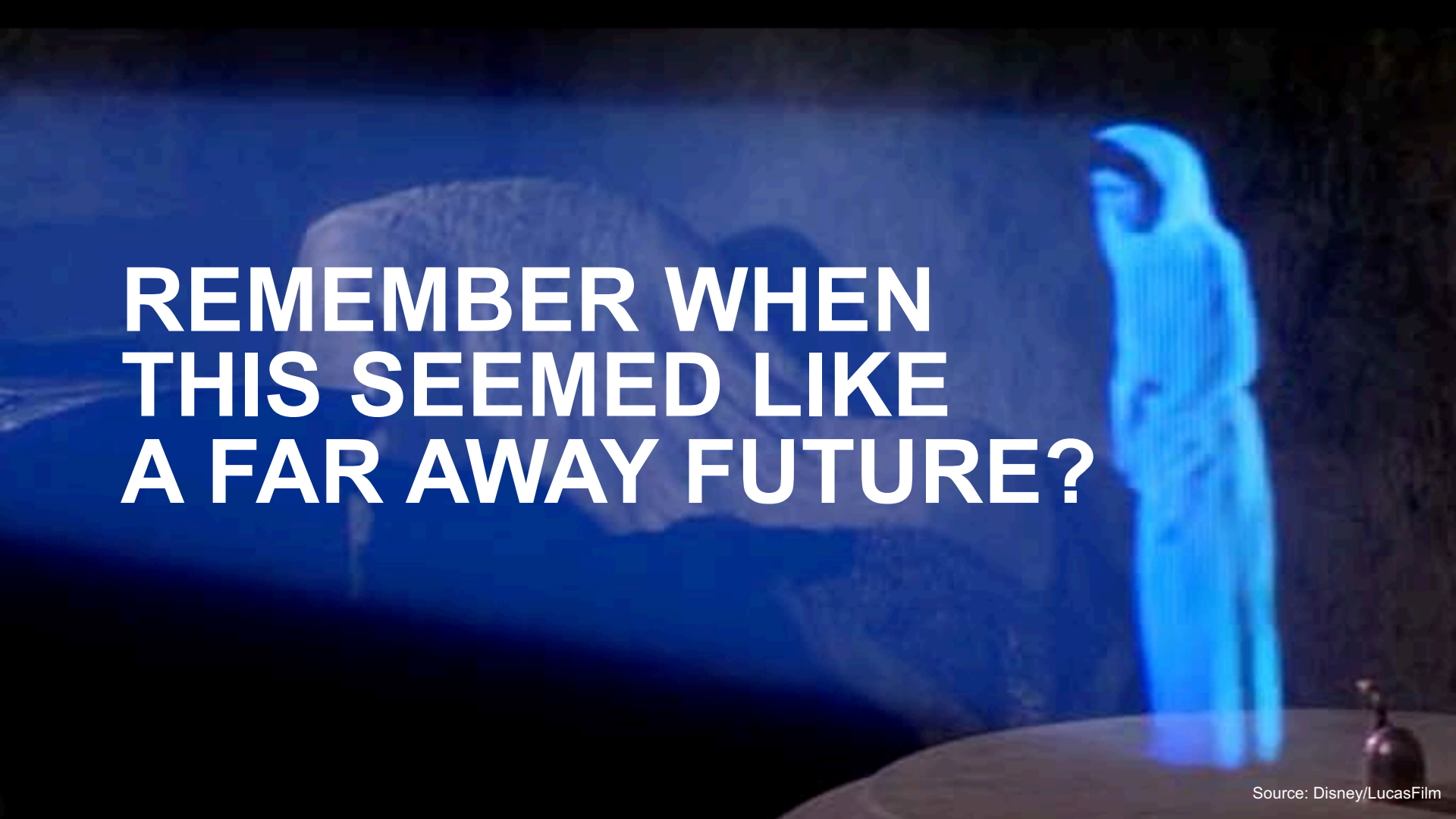


OUR NEXT STOP: WEB-AR

AUGMENTED REALITY FOR YOUR MOBILE BROWSER

ANASTASIIA MIROSHNICHENKO
WEB XR DEVELOPER AT SAINT ELMO‘S BERLIN



Source: Disney/LucasFilm

Source: Microsoft

WE CAME A LONG WAY.

Aug. 28, 1962 M. L. HEILIG 3,050,870

SENSORAMA SIMULATOR

Filed Jan. 10, 1961 8 Sheets-Sheet 3

Fig. 5.

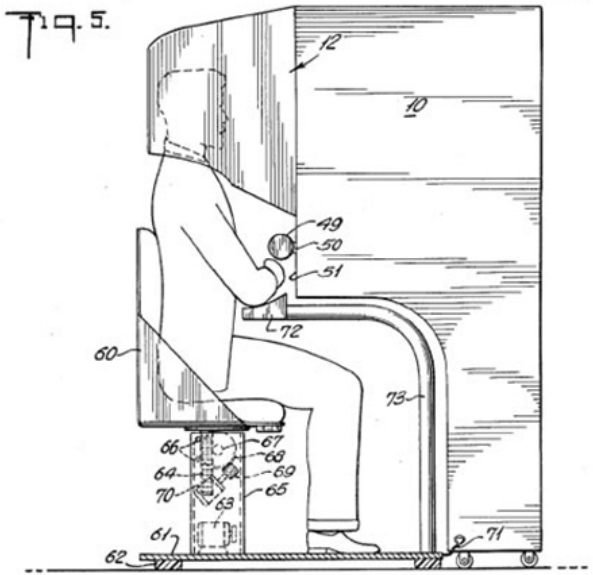
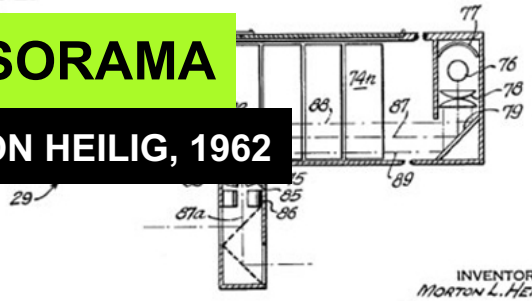


Fig. 6.



INVENTOR
MORTON L. HEILIG
BY
Douglas M. Clarkson
ATTORNEY

SENSORAMA

MORTON HEILIG, 1962

Introducing . . .

sensorama

The Revolutionary Motion Picture System that takes you into another world with

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

PATENTED

SENSORAMA, INC., 855 GALLOWAY ST., PACIFIC PALISADES, CALIF. 90272

TEL. (213) 459–2162

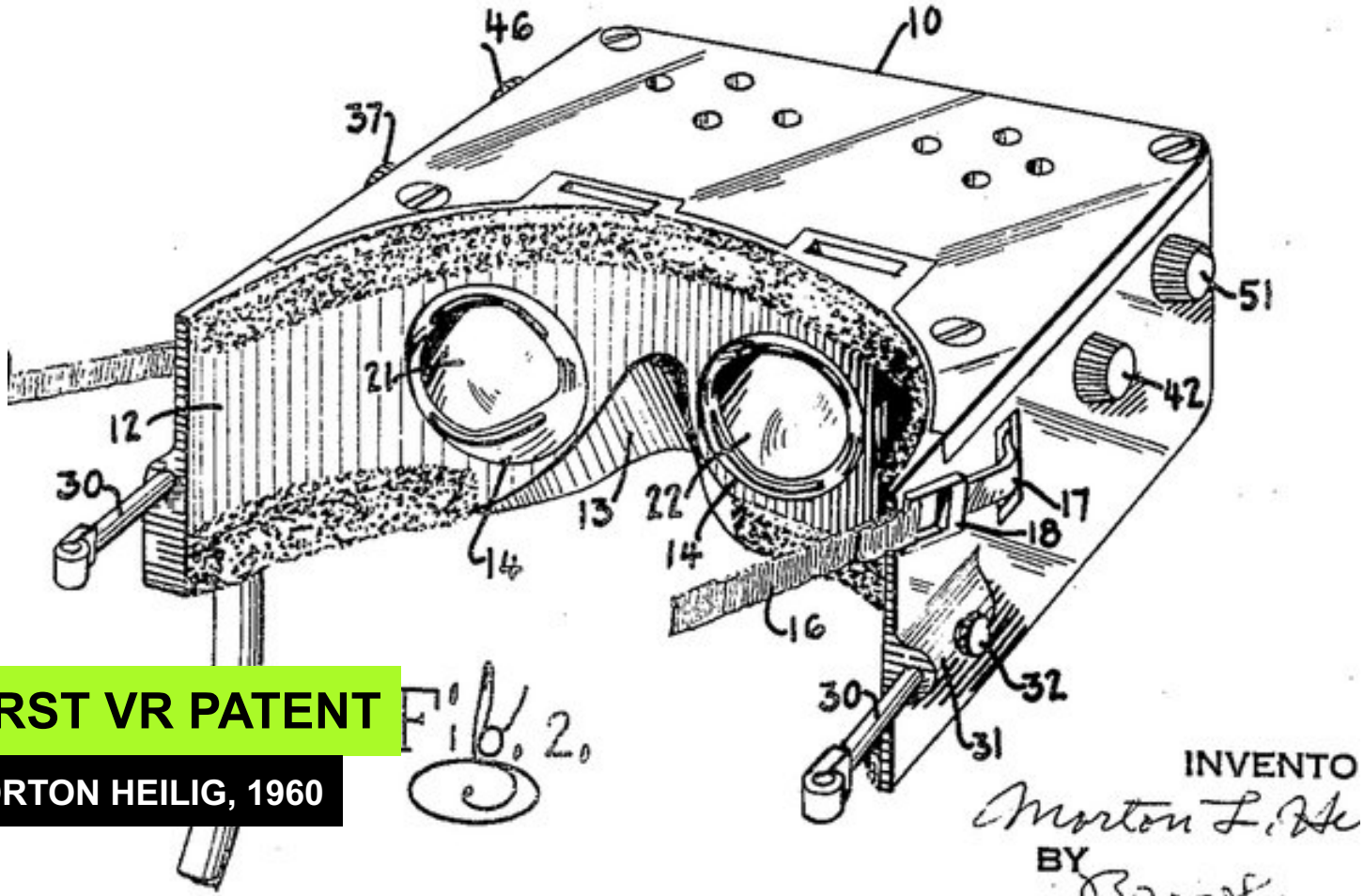


Fig. 2.

FIRST VR PATENT

MORTON HEILIG, 1960

FIRST VR HEAD MOUNTED DISPLAY

IVAN SUTHERLAND, 1968

Source: YouTube, Giulio Di Vico

TODAY YOU HOLD THE FUTURE IN YOUR HAND.

WITH MARKER

MARKERLESS

Source: Saint Elmo‘s Berlin

WHERE TO START?
WHERE TO GO?


WebGL™

ELECTRIC FLOWER WEBGL

Source: webglsamples.org


three.js

three.js - Javascript 3D library

To travel the

Secure https://threejs.org

three.js r104

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- download
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- questions
- forum
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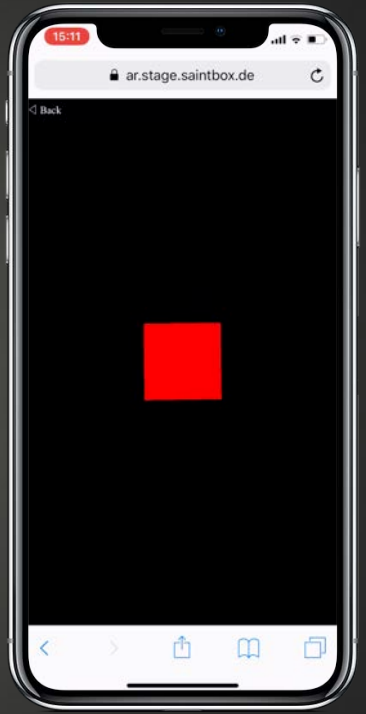

RED CUBE
THREE.JS

Source: webglsamples.org

```
<!DOCTYPE html>
<html>
<head>
    <title>Our next stop: WebAR</title>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/three.js/104/three.js"></script>
</head>
<body>
    <script>
                /* Our Javascript code will go here */
    </script>
</body>
</html>
```

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<!DOCTYPE html>
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    <script>
                var scene = new THREE.Scene();









    </script>
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    <script>
                var scene = new THREE.Scene();
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    </script>
</body>
</html>
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                renderer.setSize( window.innerWidth, window.innerHeight );
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                renderer.render( scene, camera );
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        var geometry = new THREE.BoxGeometry( 1, 1, 1 );




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        var geometry = new THREE.BoxGeometry( 1, 1, 1 );
        var material = new THREE.MeshBasicMaterial( { color: 0xff0000 } );



        renderer.render( scene, camera );
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        scene.add( cube );


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        var material = new THREE.MeshBasicMaterial( { color: 0xff0000 } );
        var cube = new THREE.Mesh( geometry, material );
        scene.add( cube );

        camera.position.z = 5;

        renderer.render( scene, camera );
</script>
```

```
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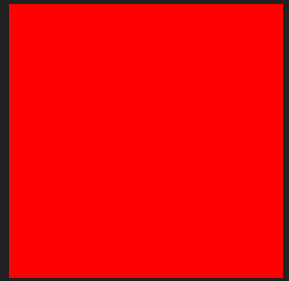

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var material = new THREE.MeshBasicMaterial( { color: 0xff0000 } );
var cube = new THREE.Mesh( geometry, material );
scene.add( cube );
camera.position.z = 5;

animate();
</script>
```

```
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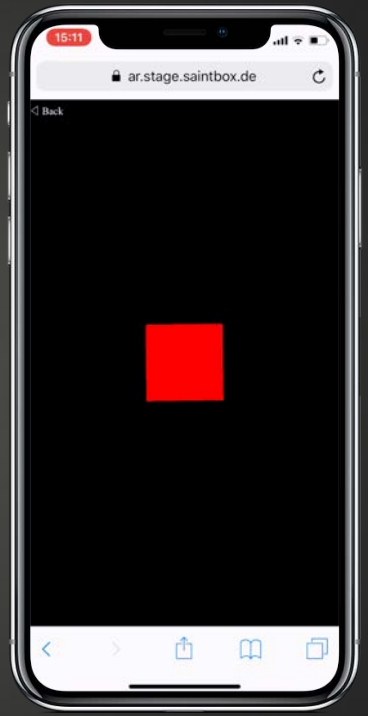
        var material = new THREE.MeshBasicMaterial( { color: 0xff0000 } );
        var cube = new THREE.Mesh( geometry, material );
        scene.add( cube );
        camera.position.z = 5;

        function animate() {
                requestAnimationFrame( animate );

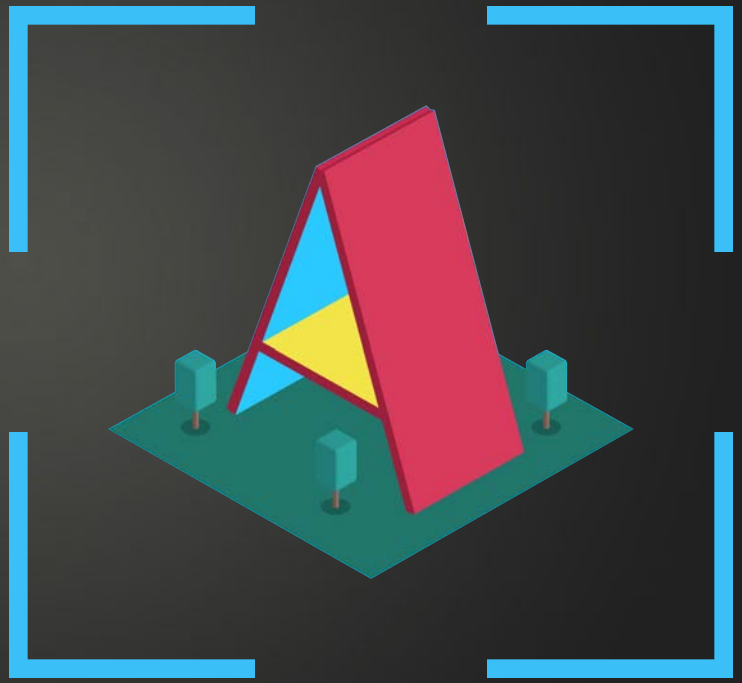
                cube.rotation.x += 0.01;
                cube.rotation.y += 0.01;

                renderer.render( scene, camera );
        }
        animate();
</script>
```



RED CUBE
THREE.JS

Source: webglsamples.org



SAINT ELMO'S / 40

A-Frame – Make WebVR

To travel the

Secure | https://aframe.io

A-FRAME

Blog

A Week of A-Frame 159 - 161

Examples

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Hello Metaverse
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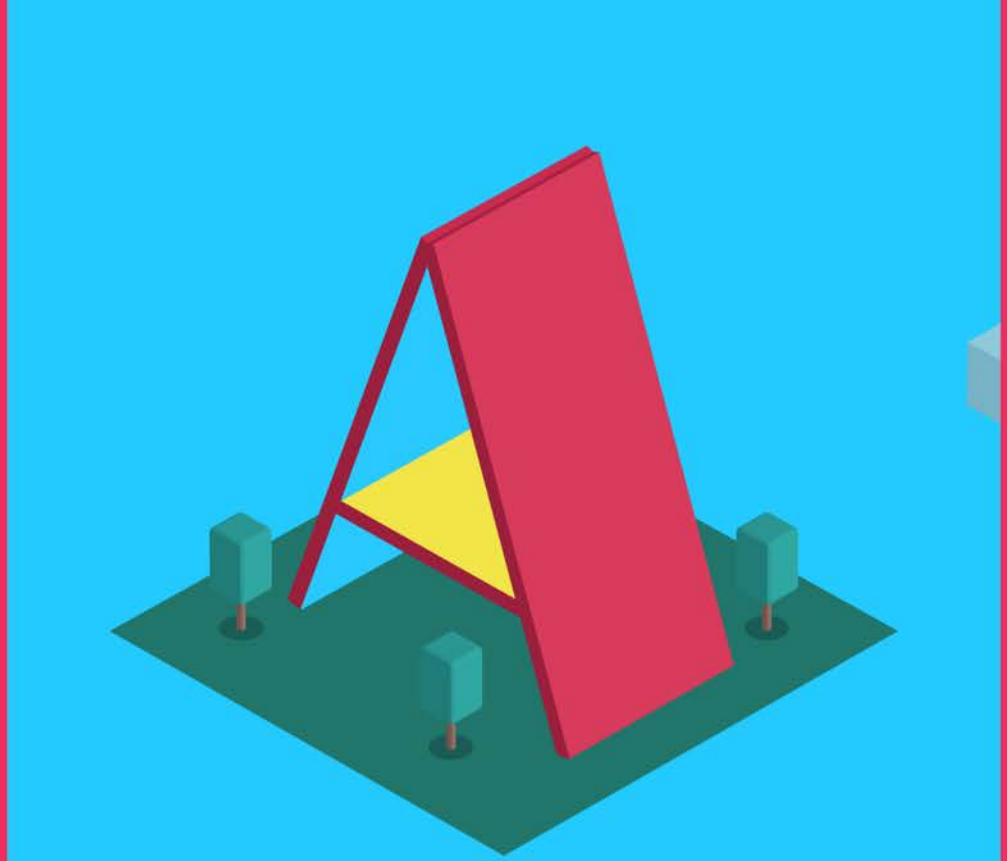
360° Image Gallery
360° Video
Animation
Anime UI
BeatSaver Viewer
Lights
Snowglobe
Gunters of OASIS
Supercraft
Super Says
Towermax Fitness
A-Blast
A-Painter
A Saturday Night



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A web framework for building virtual reality experiences

Make WebVR with HTML and Entity-Component
Works on Vive, Rift, Daydream, GearVR, desktop

GET STARTED

```
<!DOCTYPE html>
<html>
<head>
    <title>Our next stop: WebAR</title>
    <script src="https://aframe.io/releases/0.9.1/aframe.min.js"></script>
</head>
<body>
                <a-scene></a-scene>
</body>
</html>
```

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    <title>Our next stop: WebAR</title>
    <script src="https://aframe.io/releases/0.9.1/aframe.min.js"></script>
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</html>
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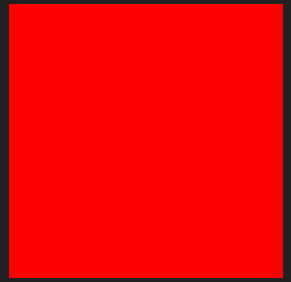
```



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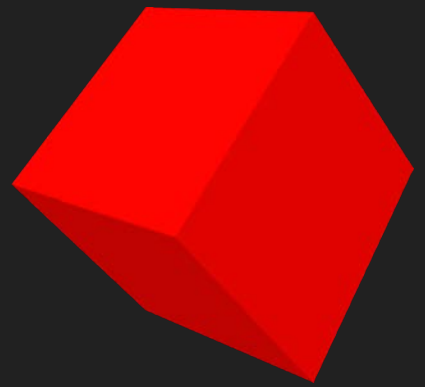

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<body>
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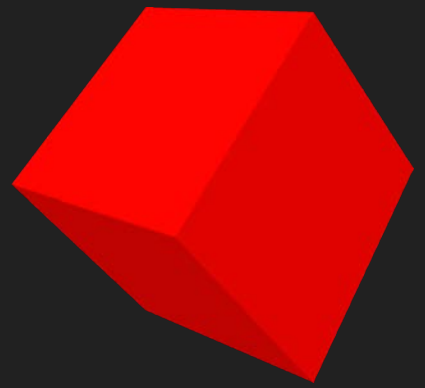
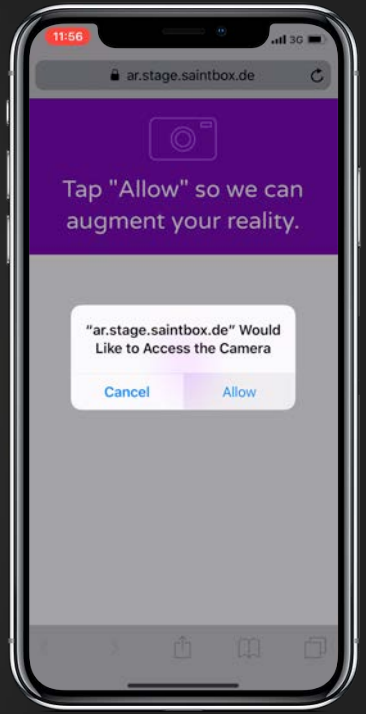


RED CUBE A-FRAME

Source: webglsamples.org

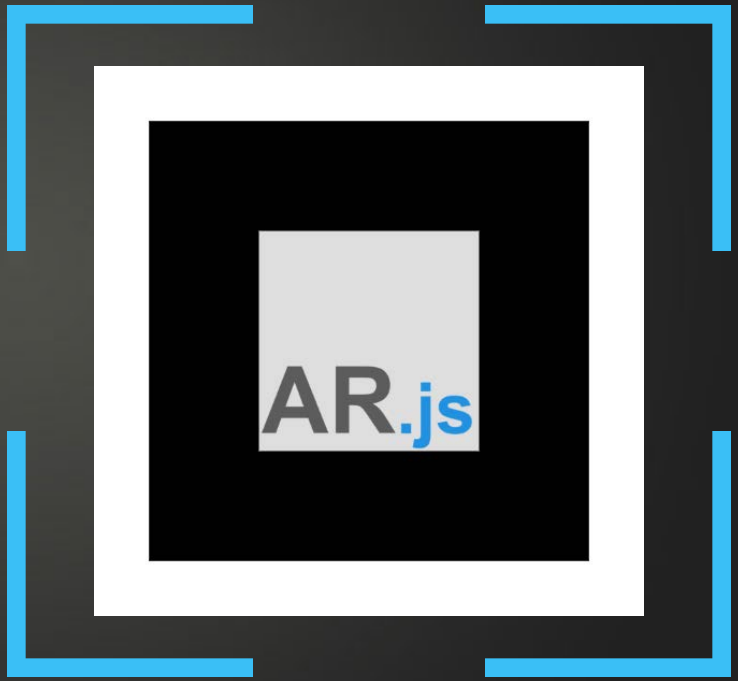
WHERE TO GO FROM HERE?

WITH MARKER



MARKERLESS

Source: Saint Elmo‘s Berlin


AR.js


Hiro

```
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</head>
<body>
                <a-scene>


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                </a-scene>
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<body>
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<body>
                <a-scene arjs embedded>

                    <a-marker preset="hiro">
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                            animation="property: rotation; to: 0 405 45; loop: true; dur: 5000"></a-box>
                    </a-marker>

                </a-scene>
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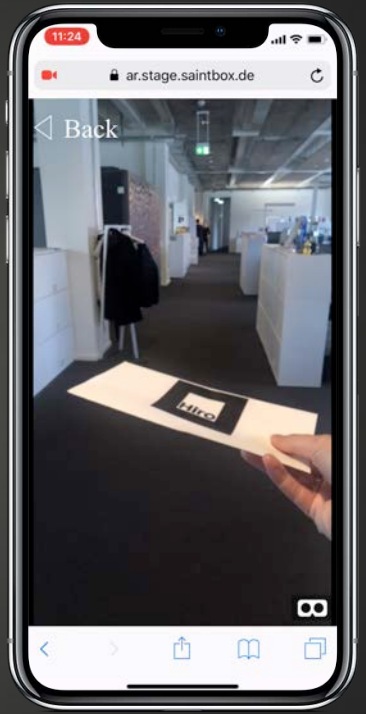
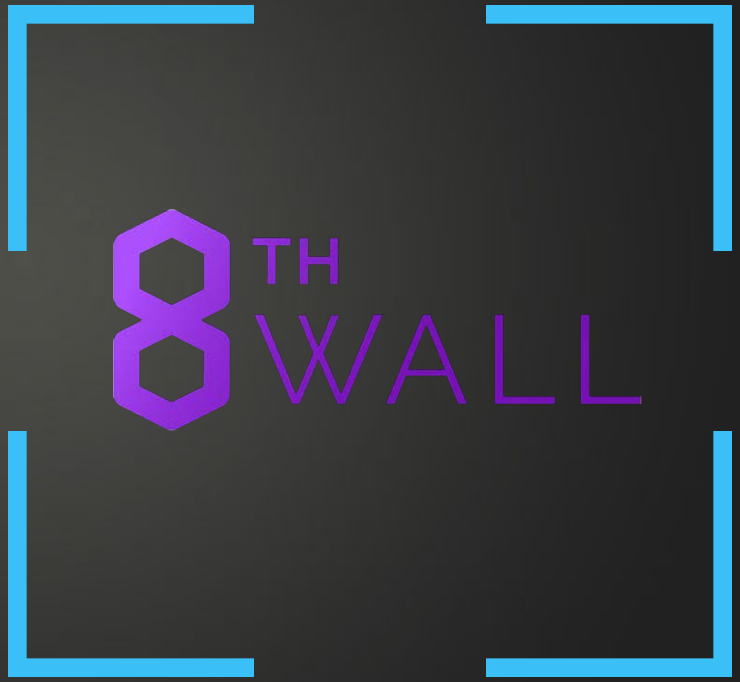
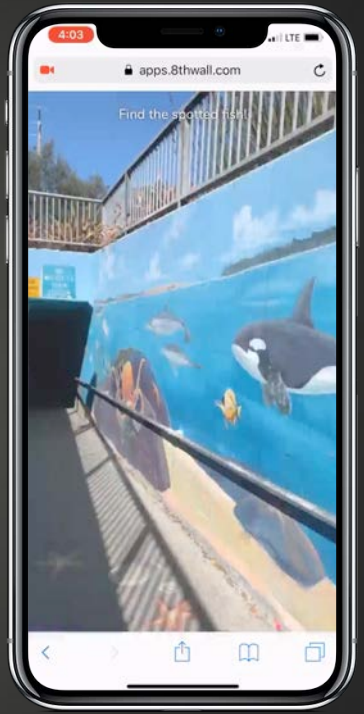


RED CUBE
AR.JS WITH HIRO MARKER

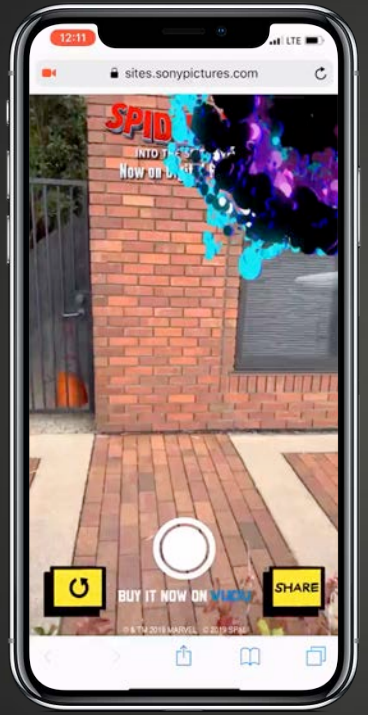
Source: webglsamples.org


8TH
WALL



WEB-AR WITH IMAGE-TARGETS

Source: 8th Wall Inc.



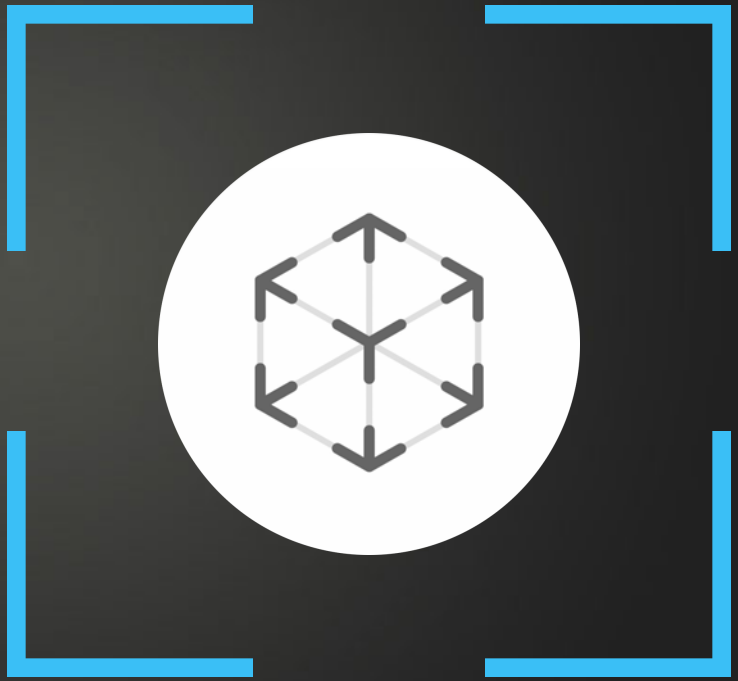
SPIDERMAN
SONY

LEGO CITY
LEGO

MILLER LIGHT
MILLERCOORS

SAINT ELMO'S / 60

Source: 8th Wall Inc.



APPLE QUICK-LOOK USDZ-FORMAT

Source: Apple/Saint Elmo‘s Berlin

WEB-AR

WEB-AR
NO APPLICATIONS

WEB-AR

NO APPLICATIONS FOR ANYONE

WEB-AR

NO APPLICATIONS FOR ANYONE FRICTIONLESS

WEB-AR

NO APPLICATIONS
FOR ANYONE
FRICTIONLESS
EASY

CONTACT ME:

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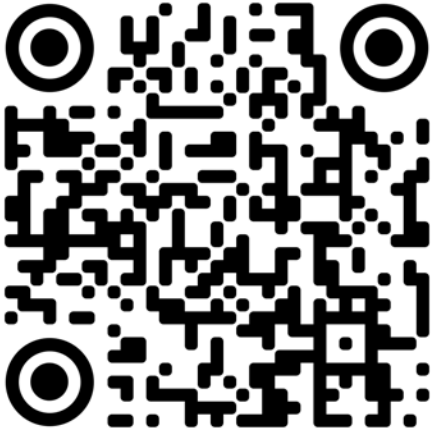
THANK YOU!




Hiro