

Virtual Reality in Web

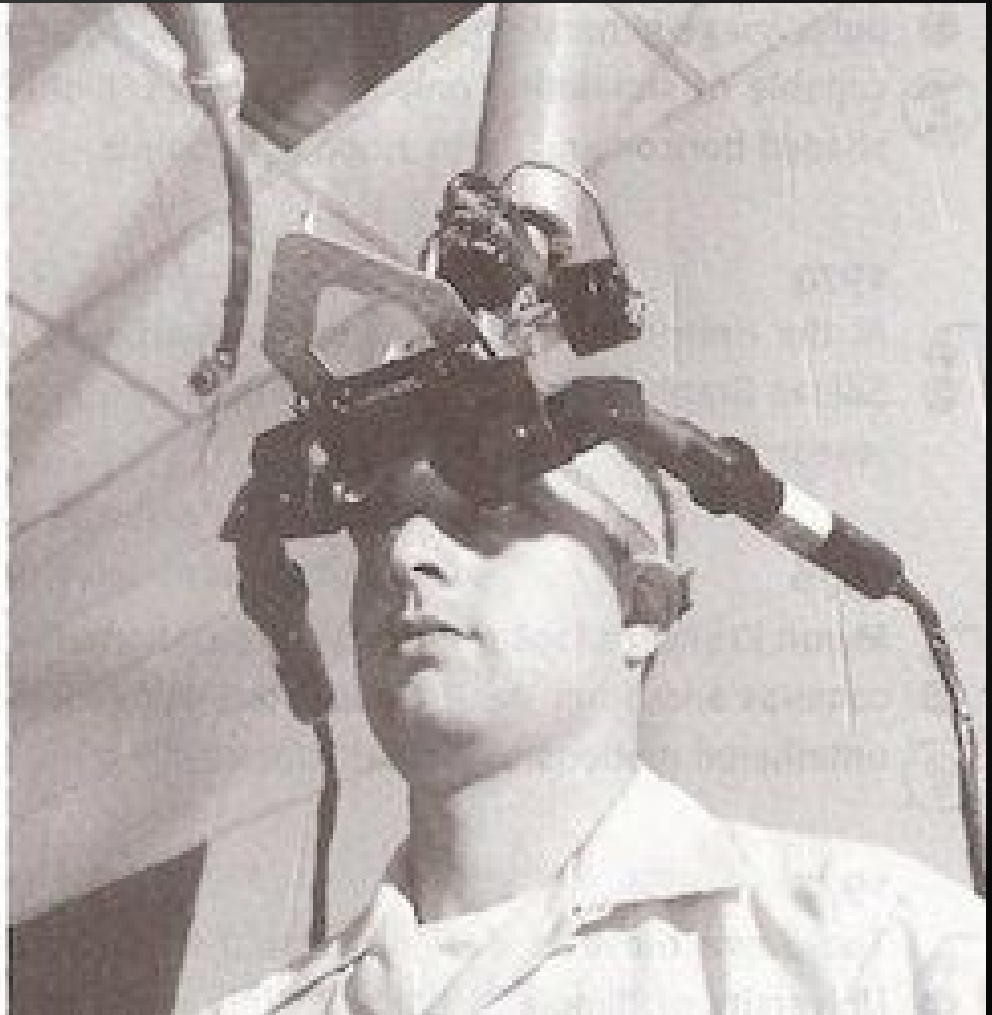
Viktor Turskyi



iForum 2017



1968 – Sword of Damocles



1993 – SEGA announce new VR glasses



Oculus Rift



HTC Vive



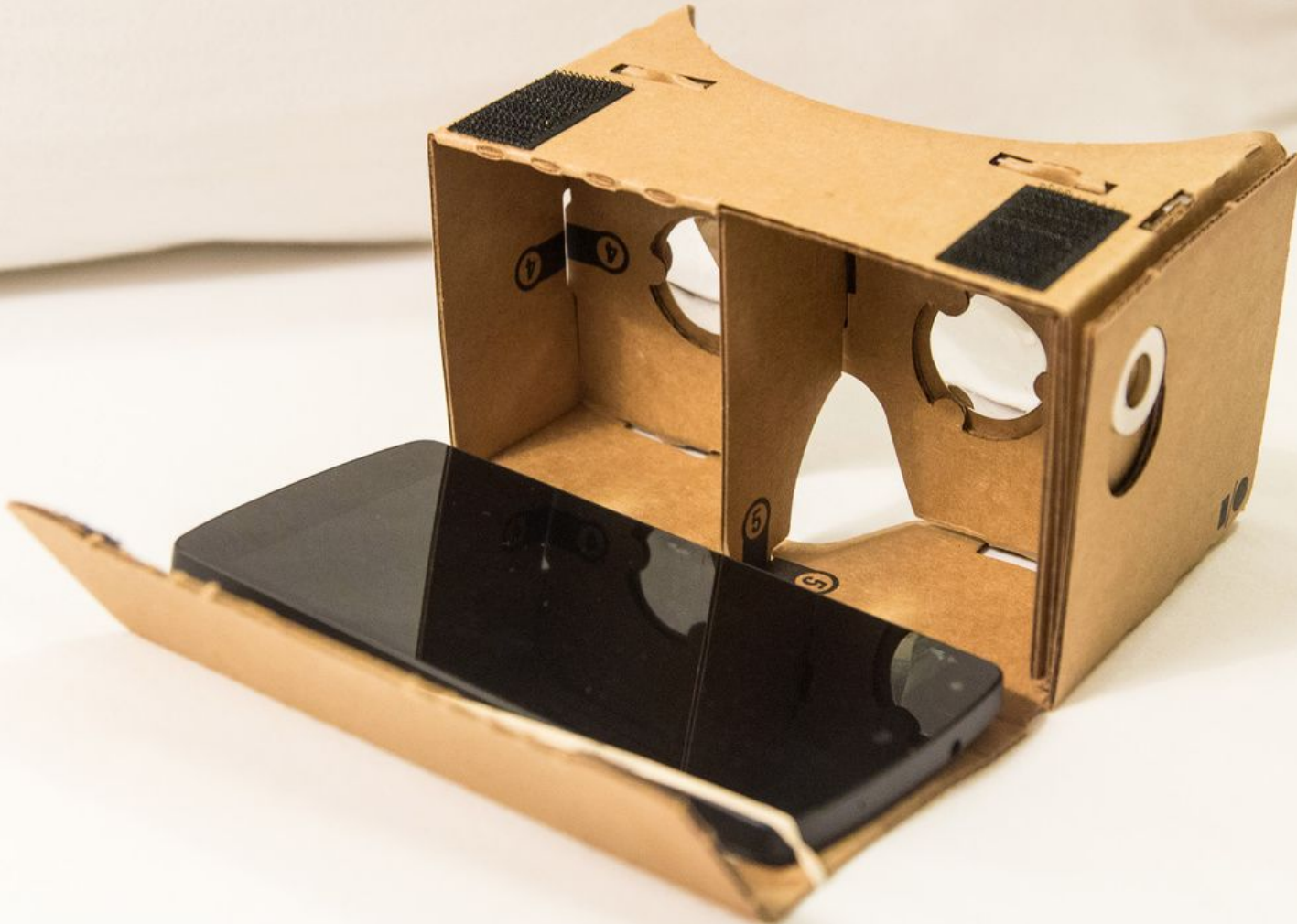
Playstation VR



Gear VR



Google Cardboard



Daydream VR



Microsoft hololens



Release

PlayStation
VR



October
'16

Oculus
Rift



March
'16

HTC
Vive



April
'16

Gear
VR



August
'16

Daydream
View



November
'16

Software

PlayStation
VR

Oculus
Rift

HTC
Vive

Gear
VR

Daydream
View



Position Tracking

PlayStation
VR



Oculus
Rift



HTC
Vive



Gear
VR



Daydream
View



Headset price

PlayStation
VR



\$399

Oculus
Rift



\$599

HTC
Vive



\$799

Gear
VR



\$99

Daydream
View



\$79

Web VR

JavaScript API for accessing VR devices

`Navigator.getVRDisplays()`

`Window.onvrdisplayconnected` (disconnected)

`VRDisplay`

`VRDisplayCapabilities`

`VRPose`

`VREyeParameters`

`VRStageParameters`

Web VR browser support

Firefox Nightly builds

Chrome 56+ for Android

Chromium experimental build

Samsung Internet Browser for Gear VR

Oculus Carmel

WebVR Polyfill

Frameworks

A-Frame

React VR

A-Frame

OpenSource

From Mozilla

More mature

Build VR with HTML

Has React wrapper

React VR Pre-Release

OpenSource

December 2016

From Oculus (Facebook)

Available on NPM



John Carmack ✓

@ID_AA_Carmack

Following



Using React (JavaScript) has turned out to be a bigger win for VR app development than I expected -- UI dev is several x faster than Unity.

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2,382



3:25 PM - 23 Mar 2017



67



1.5K



2.4K



Tweet your reply



Laurent G @cyronix99 · Mar 24



Replying to @ID_AA_Carmack

u saying that because u work for facebook or because you are really convinced its the best javascript ui framework?



3



7



John Carmack ✓ @ID_AA_Carmack · Mar 24



Just reporting the experience -- I didn't choose it, and I was a little skeptical, but it is winning big for the UI developers.



1



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React VR

React Runtime

OVRUI

Three.js

WebVR and Browser

```
class MyApp extends React.Component {
  render() {
    return (
      <View>
        <Pano source={asset('chess-world.jpg')}/>
        <Text
          style={{
            backgroundColor: 'blue',
            padding: 0.02,
            textAlign: 'center',
            textAlignVertical: 'center',
            fontSize: 0.8,
            layoutOrigin: [0.5, 0.5],
            transform: [{translate: [0, 0, -3]}],
          }}>
          ReactJs Meetup
        </Text>
      </View>
    );
  }
};

AppRegistry.registerComponent('MyApp', () => MyApp);
```

Core components (react-native)

- View
- Image
- Text

React VR components

- Model
- Pano
- VideoPano
- Box
- Scene
- Sound
- VrButton
- Light: AmbientLight, DirectionalLight, PointLight, SpotLight
- etc

Demo

Links

[React VR docs](#)

[Introduction to Best Practices](#)

[A-Frame](#)

[Awesome A-Frame](#)

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