

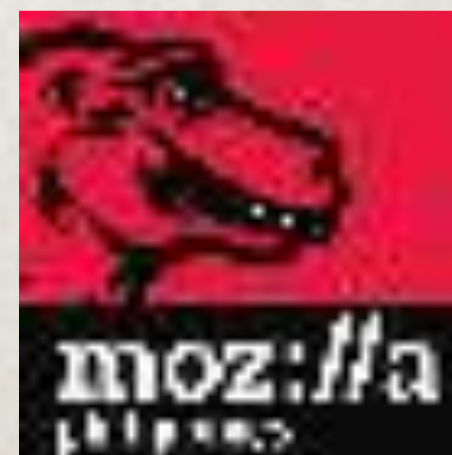


Mixed Reality for the Open Web

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Free & Open Source Software
Conference (4th Edition) 2019
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#Mozilla

#WebVR #WebXR



About Me

- Mozilla Rep for the PHL since 2011
- CTO at ALIAC.edu.ph
- Technopreneur at TurfSitePH.net
- Technology Columnist at MB.com.ph
- Team Manager at SIPFC.org
- @bobreyes in Twitter
- Dad of Xeon & Haswell
- Firefox user since Version 1.0

Being a Pinoy Mozillian...



What is Mozilla?



History of Mozilla



On 23 Jan 1998,
Netscape Communications Corp.
created a project called
Mozilla.

Mozilla was launched 31 Mar 1998.

The Mozilla Manifesto



Mozilla's Mission

To ensure the Internet is a global public resource, open & accessible to all.

An Internet that truly puts people first, where individuals can shape their own experience & are empowered, safe & independent.



We have a NEW
brand identity...

mozilla

We have a **NEW**
brand identity...

moz://a







Starting with Firefox 63, all desktop versions of Firefox include an experimental cookie policy that blocks cookies & other site data from third-party tracking resources.

FRAMES PER SECOND (FPS) WHILE RUNNING HEAVY JAVASCRIPT



AVERAGE PAGE LOAD TIME



moz://a

Mixed Reality

Mozilla Mixed Reality

- Virtual Reality (VR) seems complicated.
- But with a few JavaScript libraries & tools, & the power of WebGL, you can make very nice VR scenes that can be viewed & shared in a headset like an Oculus Go or HTC Vive, in a desktop web browser, or on your smartphone.



The Web is your realm.

mozilla

Mozilla Mixed Reality

- Our mission is to keep the Internet open to innovators, creators, & builders on the web.
- Virtual Reality is set to change the future of web interaction.
- The ability for anyone to access & enjoy VR experiences is critical.
- This is why Mozilla set out to bring virtual reality to web browsers, & why we are enabling WebVR in Firefox.

What is WebVR?



What is WebVR?

Bringing virtual reality tools, standards, & experiences to the Open Web.



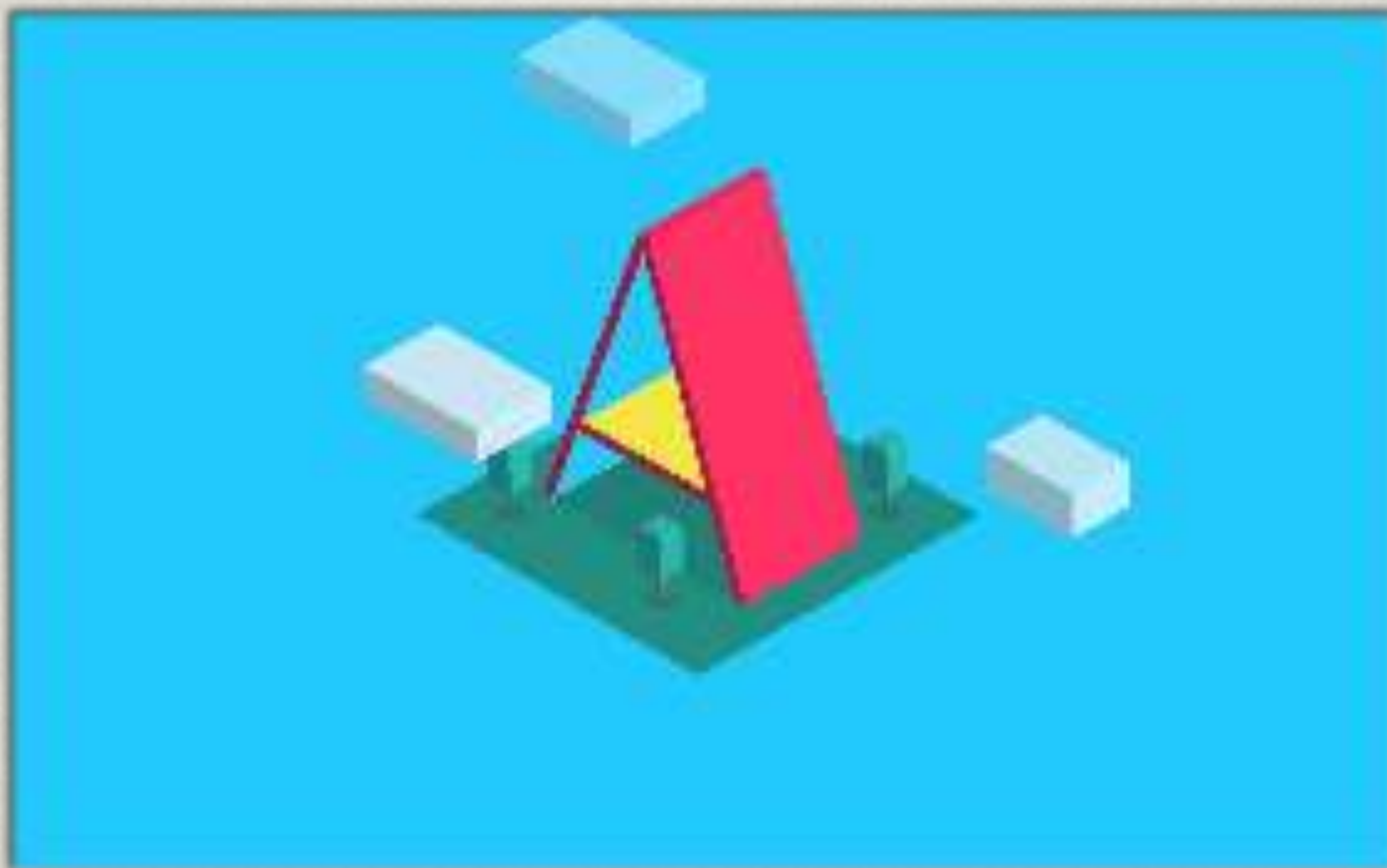
What is WebVR?

- WebVR is an experimental JavaScript API that provides access to Virtual Reality devices, such as the Oculus Rift, HTC Vive, Samsung Gear VR, or Google Cardboard, in your browser.
- Currently available on:
 - Firefox
 - Chromium (experimental builds)
 - Samsung Internet Browser for Gear VR

What is WebVR?

- WebVR has been instrumental in democratizing VR -- more people can experience 3D content without expensive headsets.
- WebVR is a huge time-saver for content creators, who need to test & verify that their work renders well on every viewing platform.
- Having a stable API to work with means 3D content can find a wider audience -- cuts down on the rework creators have to do to deliver great web experiences to a range of devices.

A-Frame



What is A-Frame?

- A-Frame is an open-source WebVR framework for creating virtual reality (VR) experiences with HTML.
- With A-Frame, you can build VR scenes that work across smartphones, desktop, the Oculus Rift/Go, & the room-scale HTC Vive.
- A-Frame is powerful, open source, & is easy to learn.

A-Frame Hello World

```
<html>
```

```
<script src="https://aframe.io/releases/0.9.0/aframe.min.js">
```

```
</script>
```

```
<a-scene>
```

```
</a-scene>
```

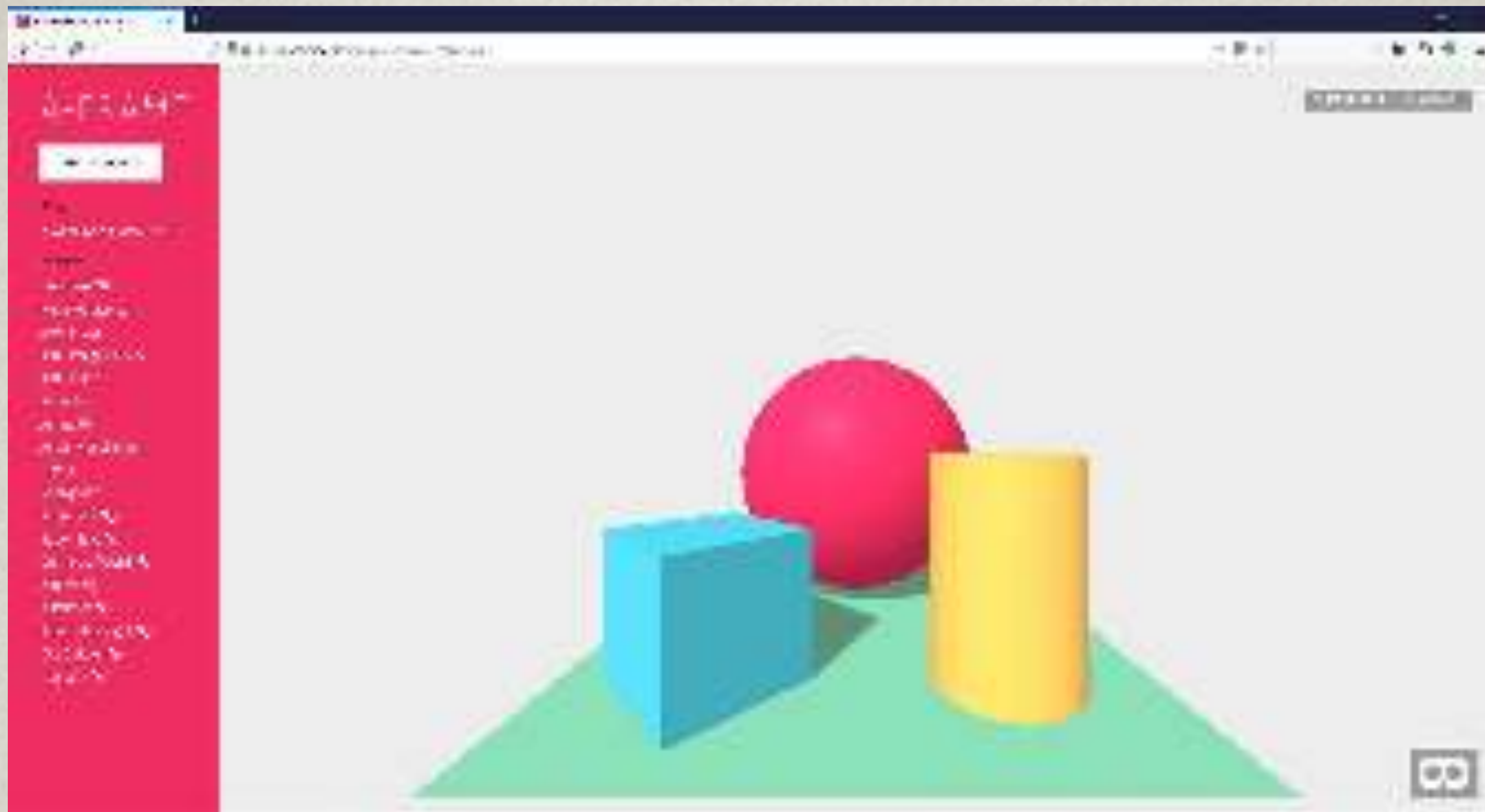
```
</html>
```

A-Frame Hello World

```
<html>
<script src="https://aframe.io/releases/0.9.0/aframe.min.js">
</script>

<a-scene>
  <a-box color="#4CC3D9" position="-1 0.5 -3"
    rotation="0 45 0"></a-box>
  <a-cylinder color="#FFC65D" position="1 0.75 -3"
    radius="0.5" height="1.5"></a-cylinder>
  <a-sphere color="#EF2D5E" position="0 1.25 -5"
    radius="1.25"></a-sphere>
  <a-plane color="#7BC8A4" position="0 0 -4"
    rotation="-90 0 0" width="4" height="4"></a-plane>
  <a-sky color="#ECECEC"></a-sky>
</a-scene>
</html>
```





<https://aframe.io>

Works With...



What is WebXR?

An API that allows developers to create XR experiences. XR a catch-all term that spans AR, VR & newly-developed immersive technologies.



Why WebXR?

- Mixed Reality is going to be a powerful platform, bringing highly engaging & emotionally evocative immersive content to the web.
- Like any new creative medium, we want it to be widely accessible, so curious viewers can experience the next generation of digital media without having to shell out hundreds of dollars for a high-end viewer.
- For instance, the camera on most mobile phones can be used to overlay information on physical reality.



Firefox Reality was specifically designed to tackle all of the new opportunities (& challenges) that come with browsing in VR.



Firefox Reality on Oculus Go



Easily create custom 3D environments with Spoke by Mozilla.

Spoke by Mozilla

- Create 3D social scenes for Hubs.
 - **Hubs by Mozilla**
[<https://hubs.mozilla.com/>] is an immersive communication on any device.
- Beginners can learn Spoke in 5 minutes.
- Advanced Spoke can be learned in 10 minutes.



Mozilla's Unity WebVR Assets are FREE & available via the Unity Asset Store.

It allows creators to publish & share VR experiences created in Unity on the Open Web.



Photo from #BrazilJS 2016



please don't hurt the web
Use open standards

Q&A



Thank you!
Maraming salamat po!

bob@mozillaph.org

