

Pokémon GO

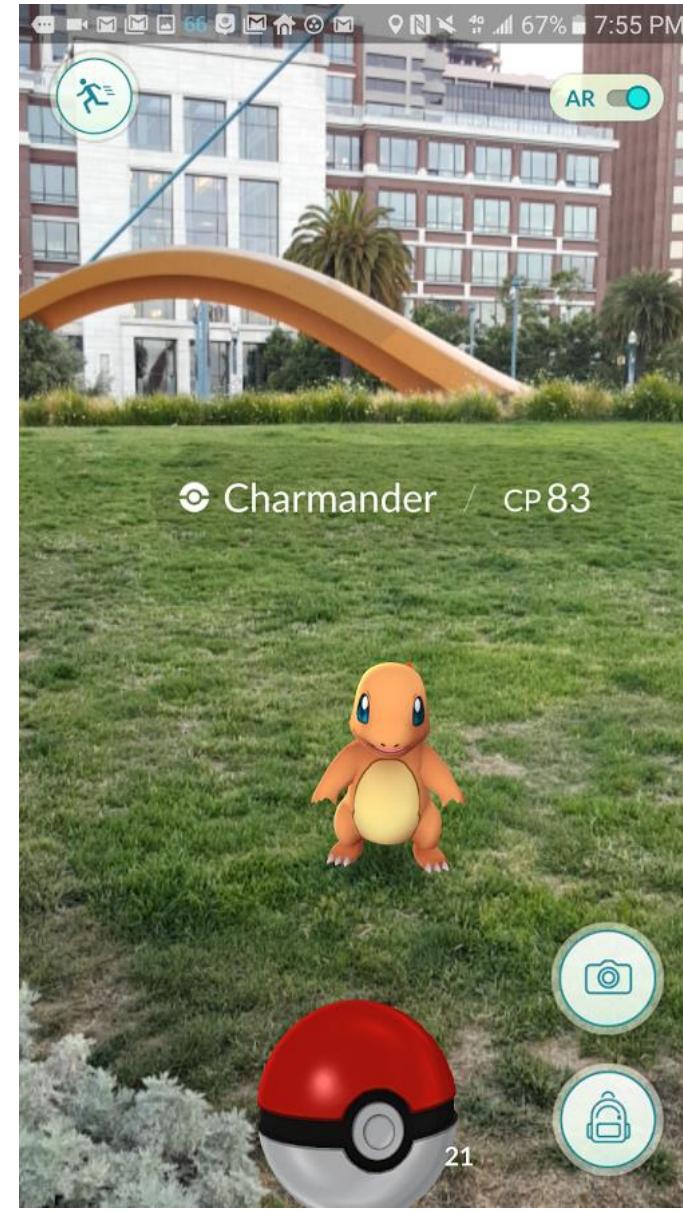
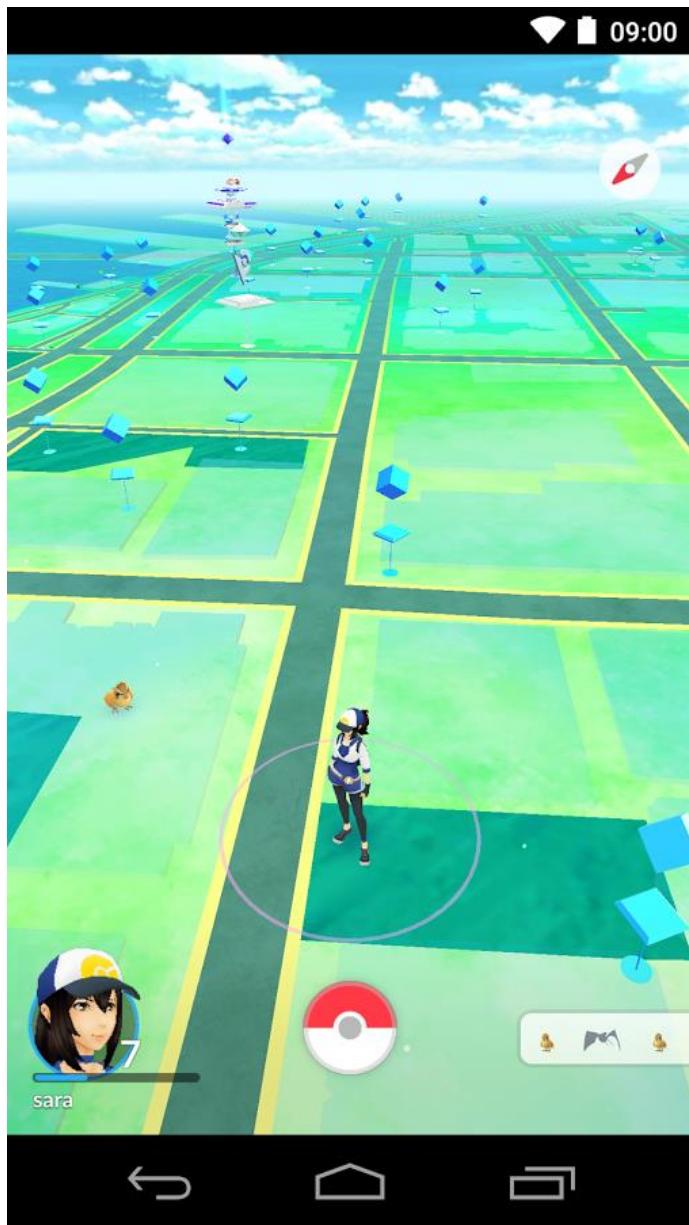
на веб-технологиях



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Делаю на веб-технологиях игры,
приложения на телевизоры и VR.

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Что может предложить веб?

- Геолокация
- Отслеживания положения устройства
- Захват картинки с камеры

Геолокация

<https://www.w3.org/TR/geolocation-API/>

- Geolocation.getCurrentPosition()
- Geolocation.watchPosition()
- Geolocation.clearWatch()



```
if (navigator.geolocation) {  
    /* geolocation is available */  
} else {  
    /* geolocation IS NOT available */  
}
```

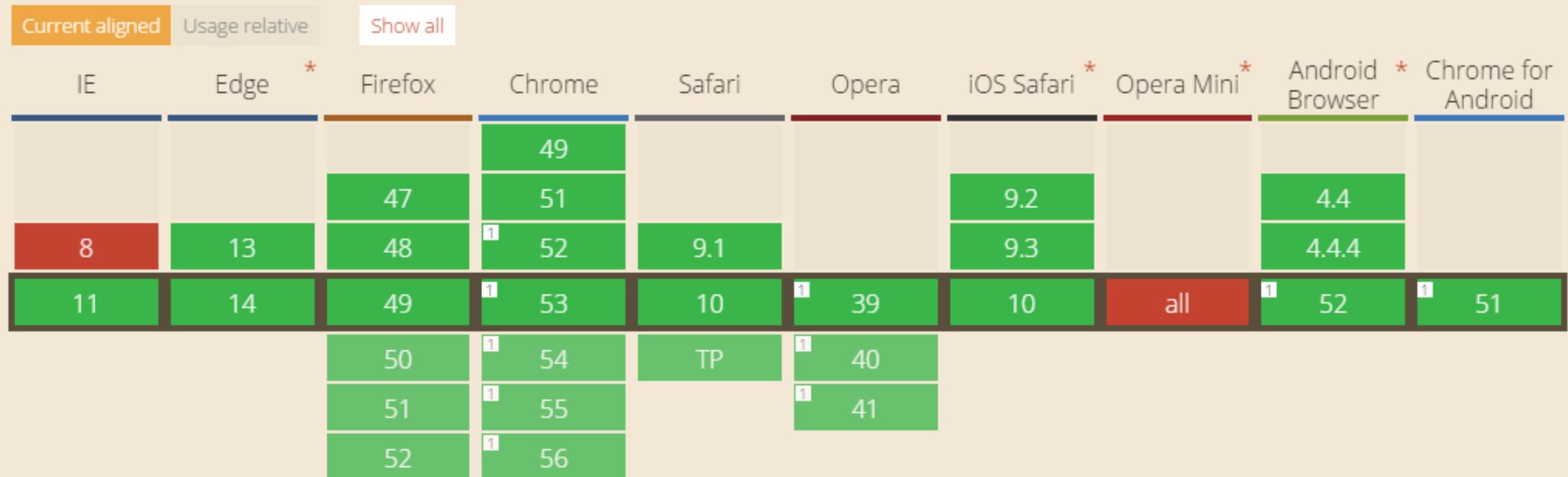
```
navigator.geolocation.getCurrentPosition(  
    function(position) {  
        do_something(  
            position.coords.latitude,  
            position.coords.longitude,  
            position.timestamp  
        );  
    }  
);
```

Geolocation - REC

Global

92.32% + 0.01% = 92.33%

Method of informing a website of the user's geographical location



Notes

Known issues (4)

Resources (6)

Feedback

¹ Only works on secure ([https](https://)) servers

Device Orientation Event

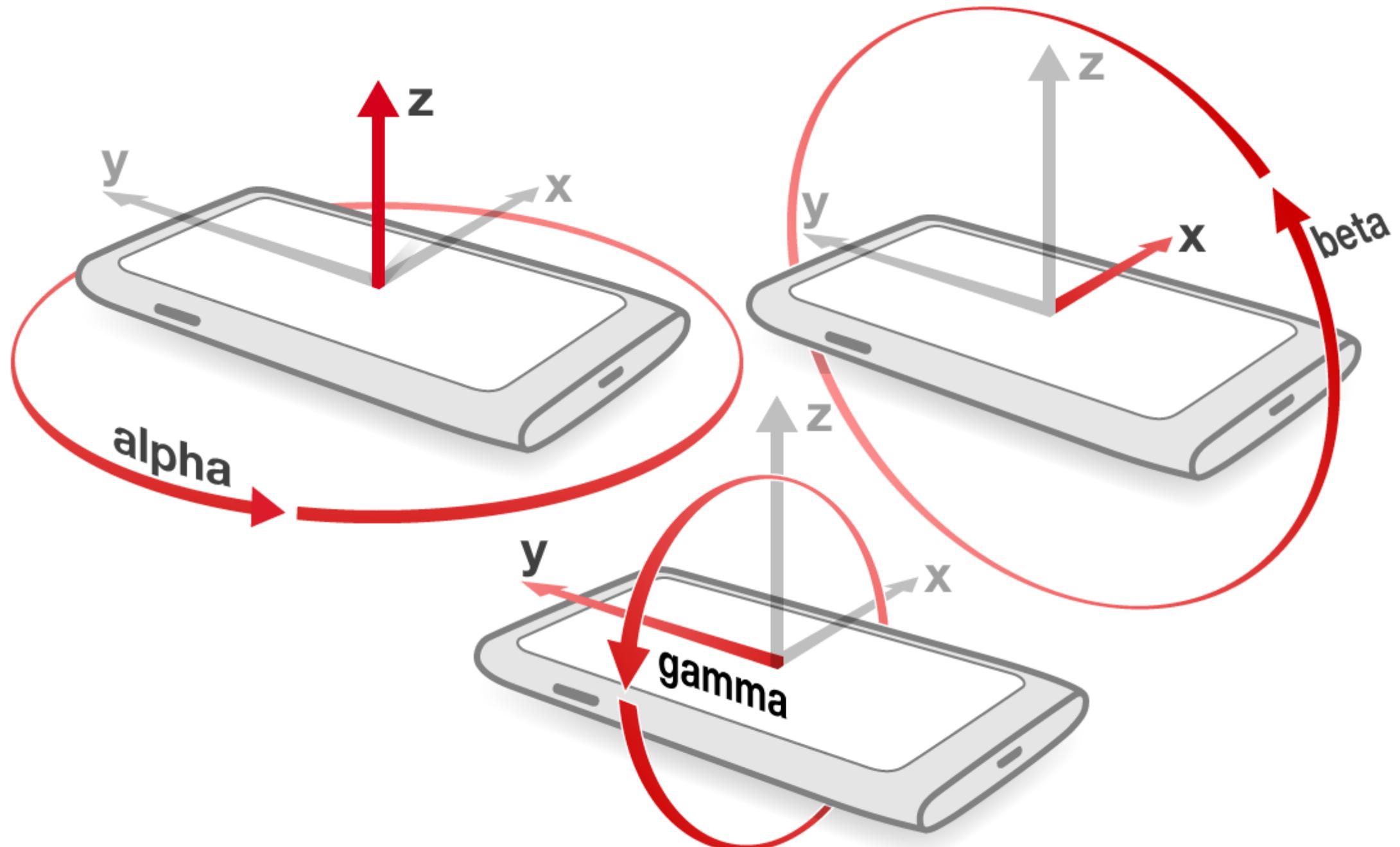
<https://www.w3.org/TR/orientation-event/>

- deviceorientation
- devicemotion
- compassneedcalibration



```
if (window.DeviceOrientationEvent) {  
    /* DeviceOrientationEvent is available */  
} else {  
    /* DeviceOrientationEvent IS NOT available */  
}
```

```
window.addEventListener('deviceorientation',
  function (event) {
    do_something(
      event.alpha,
      event.beta,
      event.gamma
    )
  }
);
```



```
if (window.DeviceMotionEvent) {  
    /* DeviceMotionEvent is available */  
} else {  
    /* DeviceMotionEvent IS NOT available */  
}
```

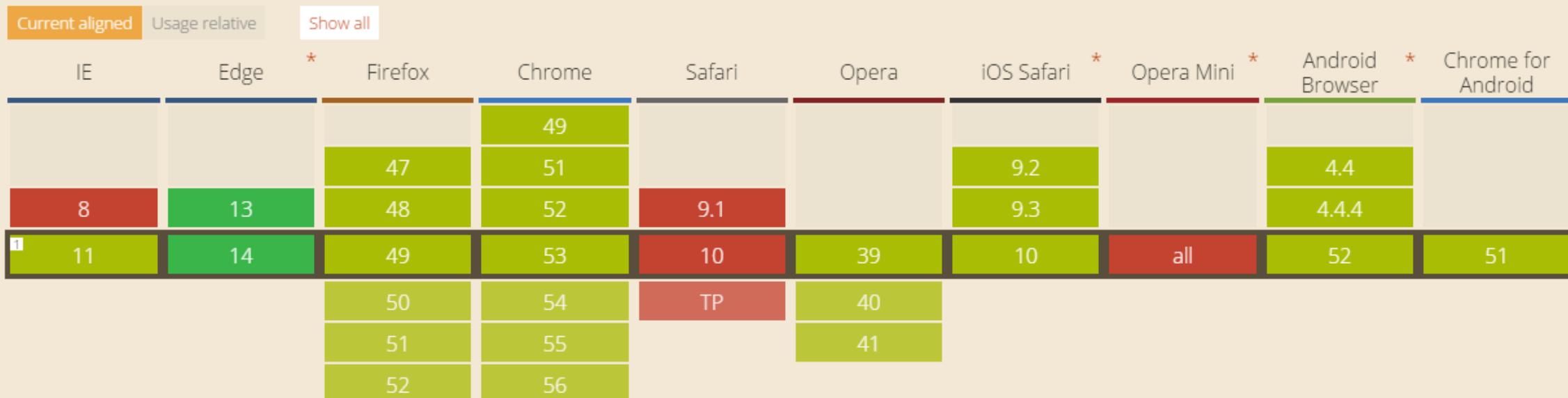
```
window.addEventListener('devicemotion',
  function (event) {
    do_something(
      event.acceleration.x, // y, z
      event.accelerationIncludingGravity.x, // y, z
      event.rotationRate.alpha, // beta, gamma
      event.interval
    )
  }
);
```

DeviceOrientation & DeviceMotion events

Global

2.14% + 86.85% = 88.99%

API for detecting orientation and motion events from the device running the browser.



Notes

Known issues (2)

Resources (10)

Feedback

Partial support refers to the lack of `compassneedscalibration` event. Partial support also refers to the lack of `devicemotion` event support for Chrome 30- and Opera. Opera Mobile 14 lost the `ondevicemotion` event support. Firefox 3.6, 4 and 5 support the non-standard `MozOrientation` event.

¹ `compassneedscalibration` supported in IE11 only for compatible devices with Windows 8.1+.

А ПОТОМ...

- AccelerometerSensor - <http://www.w3.org/TR/accelerometer/>
- GyroscopeSensor - <http://www.w3.org/TR/gyroscope/>
- MagnetometerSensor - <http://www.w3.org/TR/magnetometer/>

Media Capture and Streams

<https://w3c.github.io/mediacapture-main/>

- ...
- `navigator.mediaDevices.getUserMedia`
- `navigator.mediaDevices.enumerateDevices`



```
if (navigator.mediaDevices) {  
    /* mediaDevices is available */  
} else {  
    /* mediaDevices IS NOT available */  
}
```

```
navigator.mediaDevices.enumerateDevices()
  .then(function (devices) {
    devices.forEach(function (device) {
      do_something(
        device.kind,
        device.label,
        device.deviceId
      );
    });
  });
}
```

```
navigator.mediaDevices.getUserMedia({
  video: {
    width: width,
    height: height,
    deviceId: deviceId
  }
}).then(function (stream) {
  do_something(stream);
});
```

getUserMedia/Stream API - WD

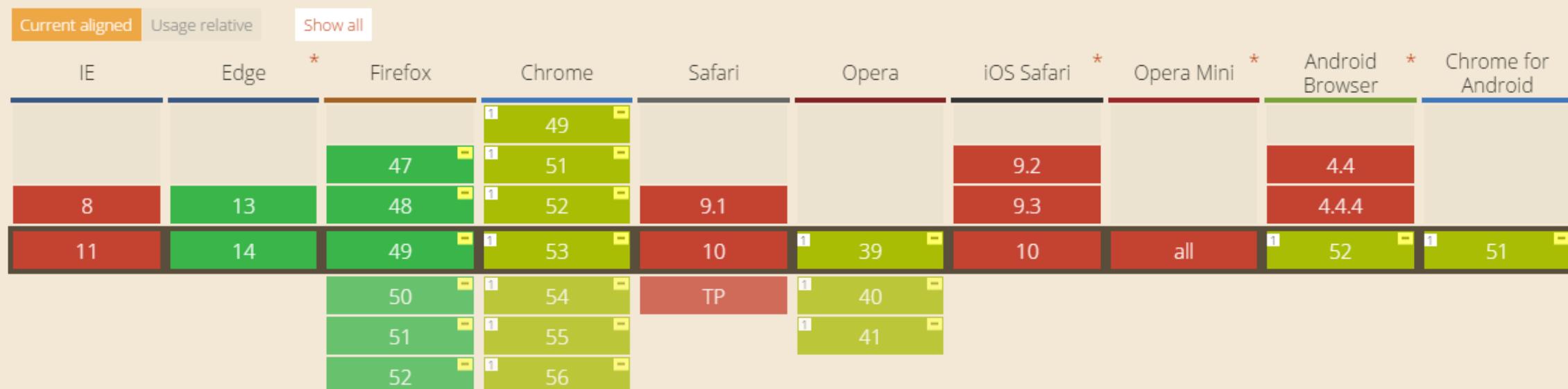
Global

$9.09\% + 58.9\% = 67.99\%$

unprefixed:

1.6%

Method of accessing external device data (such as a webcam video stream). Formerly this was envisioned as the <device> element.

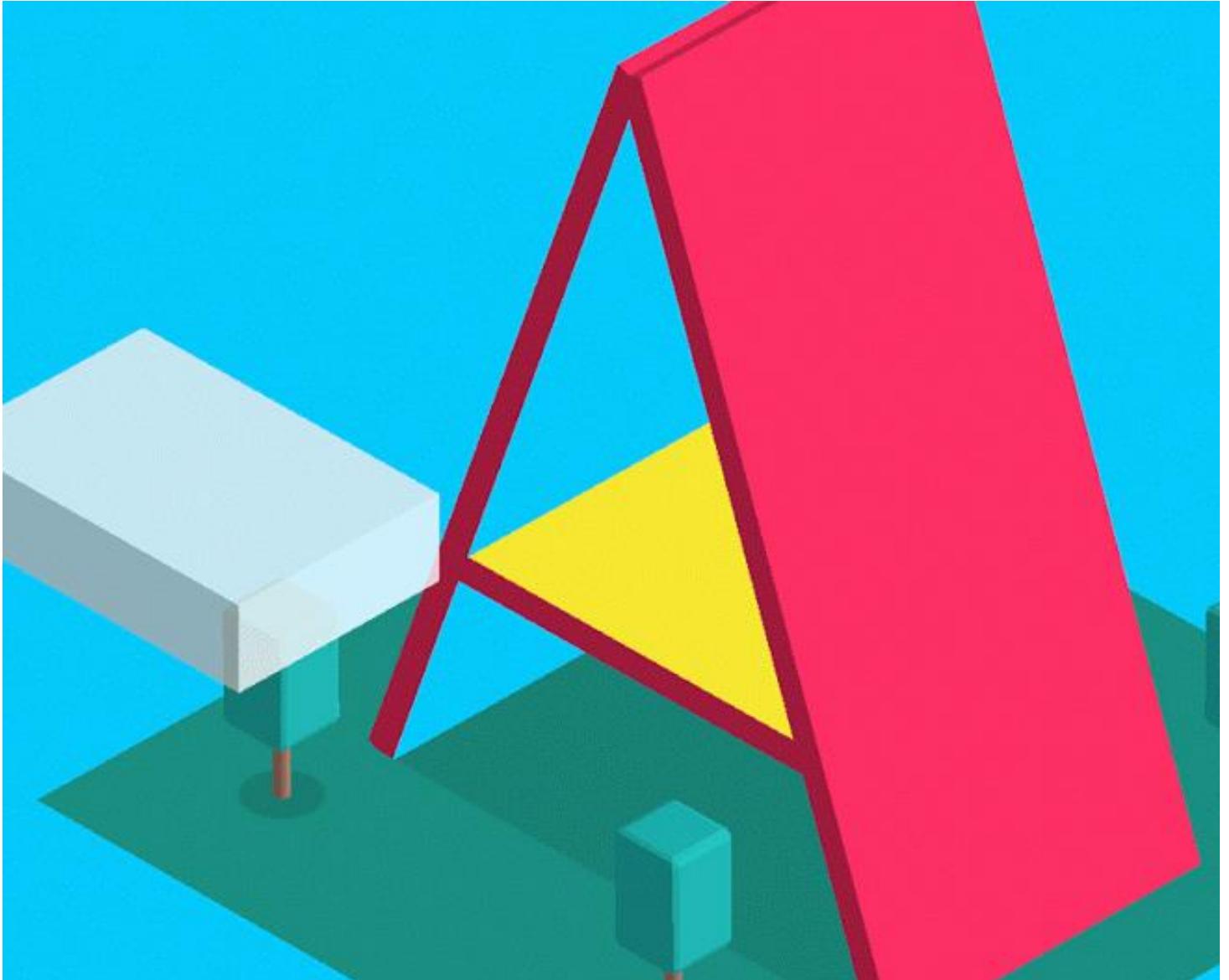


As of Chrome 47, the getUserMedia API cannot be called from insecure origins.

¹ Blink-based (and some other) browsers support an older version of the spec that does not use `srcObject`. See Chromium issue 387740.

A-FRAME

aframe.io



```
<script src="aframe.js"></script>

<a-scene>
  <a-sphere position="0 1.25 -1"
    radius="1.25"
    color="#EF2D5E">
  </a-sphere>

  <a-entity position="0 0 3.8">
    <a-camera></a-camera>
  </a-entity>
</a-scene>
```

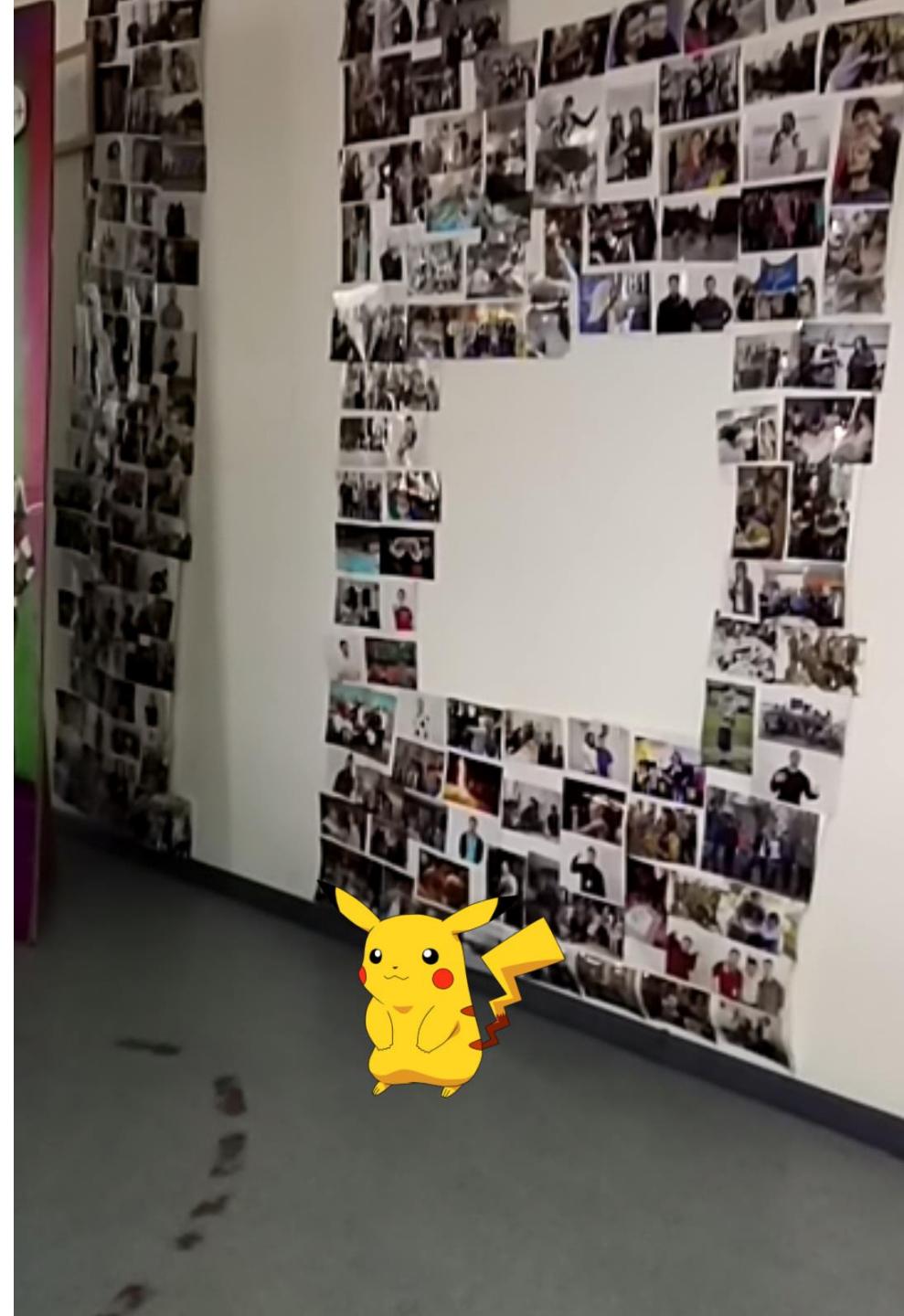
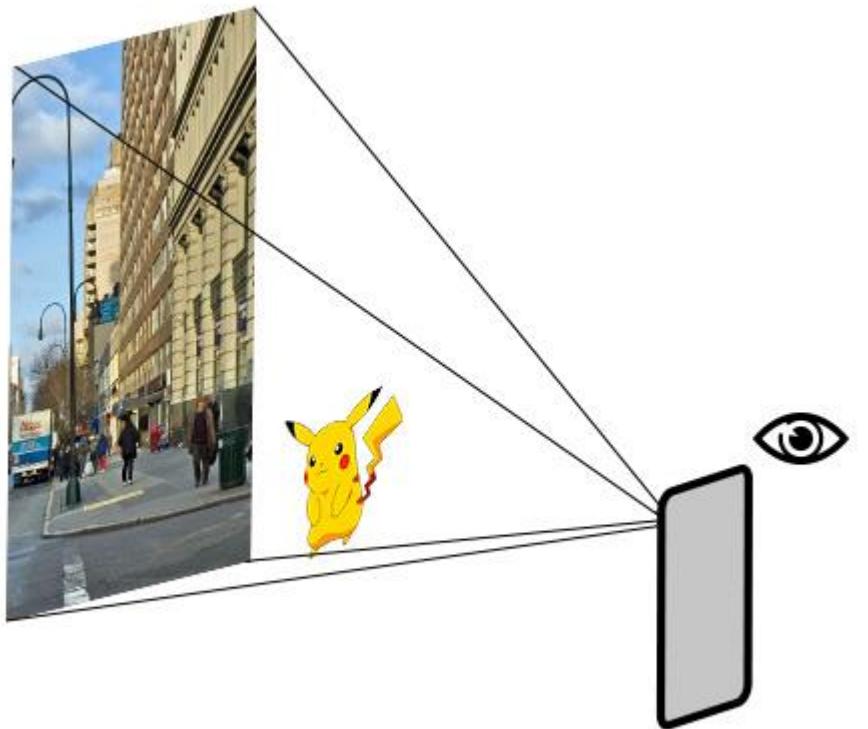
Подключаем карту на практике

[Google Static Maps API](#)



```
<a-plane id="map"></a-plane>  
navigator.geolocation.getCurrentPosition(  
  function(position){  
    mapEl.src = getMapQuery(position);  
  }  
);
```

Включаем камеру и
выводим изображение



```
<a-entity look-controls>
  <a-camera ...></a-camera>
  <a-video id='fromDevice' ...></a-video>
</a-entity>
<a-plane id='pokemon'></a-plane>

navigator.mediaDevices.enumerateDevices()
  .then(function (devices) {
    devices.forEach(function (device) {
      if (device.kind === 'videoinput' && device.label.match(/back/)) {
        navigator.mediaDevices.getUserMedia({
          video: {
            deviceId: device.deviceId
          }
        }).then(function (stream) {
          videoEl.src = window.URL.createObjectURL(stream);
        });
      }
    });
  })
})
```

Demo

Вопросы?

<https://agegorin.ru:447/webpokego/>
github.com/agegorin/webpokego

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Изображение - [Isaac Ramirez](#)

