



big data

YOO

g o o g l e

know

you can

do

Tools

browsersec

info

**WEB is
EVOLVING**





WEB is
EVOLVING
AND IT'S HERE
TO STAY.



Interact with reality

atandreicek



atandreicek



EVERYSINGLE

COOL PROJECT

STARTS WITH



CHROME FLAGS
* CHROME 45

PARTIE DE LA

CO STE DE GUINEE

Depuis la Riviere de Sierra Leona

Jusquau Cap das Palmas

Dressée sur les Journaux et les Remarques des Na-
vigateurs, Par N. Bellin Ingenieur de la Marine.

1746.

Echelle de Lieues Marines de France :
Schaal van ZEE-MYLEN, 20 in eenen Graad.

5 10 15 20 25 30 35 40 L.

Nota

l'Interieur du Pays et le Cours
des Rivieres ne sont pas connus:
't Binnenste des' Lands
en den Loop der
Rivieren, zyn
niet bekend.
De Naamen
hierin uit-
gaande op OU,
eindigen by
ons in OE.



A collage of various letters from a historical map, including B, O, R, I, E, K, C, S, U, O, S, I, S, H, D, G, A, S, and N, set against a background of a 17th-century map of the Americas.



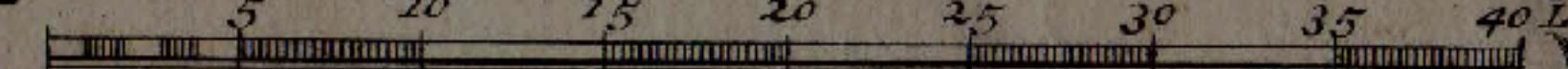
PARTIE DE LA

COSTE DE GUINEE

Depuis la Riviere de Sierra Leona
Jusquau Cap das Palmas

Dressée sur les Journaux et les Remarques des Navigateurs, Par N. Bellin Ingénieur de la Marine.

Echelle de Lieues Marines de France : 1740.
Schaal van ZEE-MYLEN, 20 in eenen Graad.



Nota

*l'Interieur du Pays et le Cours
des Rivieres ne sont pas connus:
't Binnenste des Lands
en den Loop der
Rivieren, zyn
niet bekend.*



PARTIE DE LA
OSTE DE GUINEE
s la Riviere de Sierra Leona
Jusquau Cap das Palmas

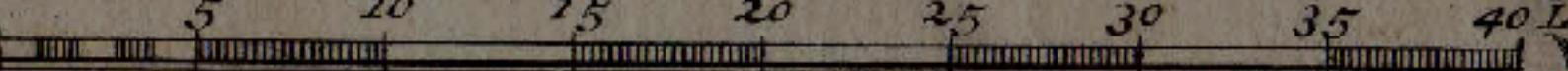
Depuis la Riviere de Sierra Leona Jusquau Cap das Palmas

Dressée sur les Journaux et les Remarques des Navigateurs, Par N. Bellin Ingénieur de la Marine.

1740.

Echelle de Lieues Marines de France :

Schaal van ZEE-MYLEN, 20 in eenen Graad.



Nota

*L'Interieur du Pays et le Cours
des Rivieres ne sont pas connus:
't Binnenste des Lands
en den Loop der
Rivieren, zyn
niet bekend.*

U ^{et Dieppe} _{en Dieppe}

edit. Diego
as Klyn Diet

I

1

Cosine

ou D
ys DEE

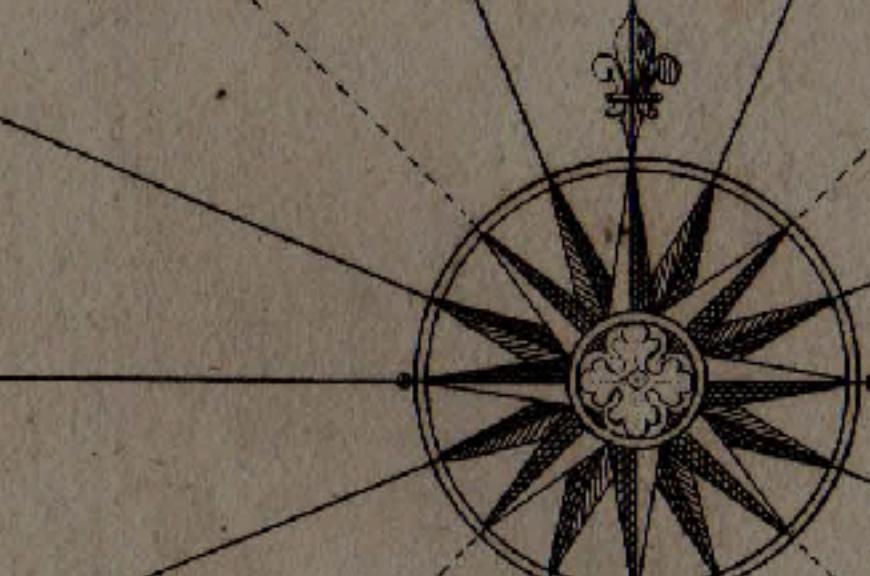
$\text{La}_2\text{Mo}_3\text{O}_9$

1

1

6 12 10

Les Cartes Angloises marquées
ici la Rivière de St. Mar-
De Engelsche Kaarten pla-
cen hier de Rivier St. Ma-



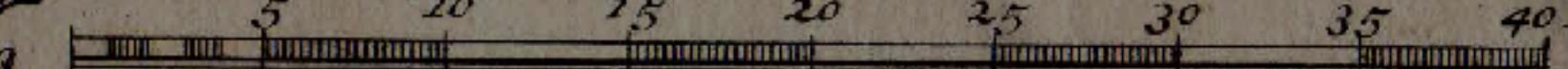
*PARTIE DE LA
COSTE DE GUINEE
puis la Riviere de Sierra Leona
Jusquau Cap das Palmas*

Depuis la Riviere de Sierra Leona Jusquau Cap das Palmas

Dressée sur les Journaux et les Remarques des Navigateurs, Par N. Bellin Ingénieur de la Marine.

1740.

Echelle de Lieues Marines de France :
Schaal van ZEE-MYLEN, 20 in eenen Graad.

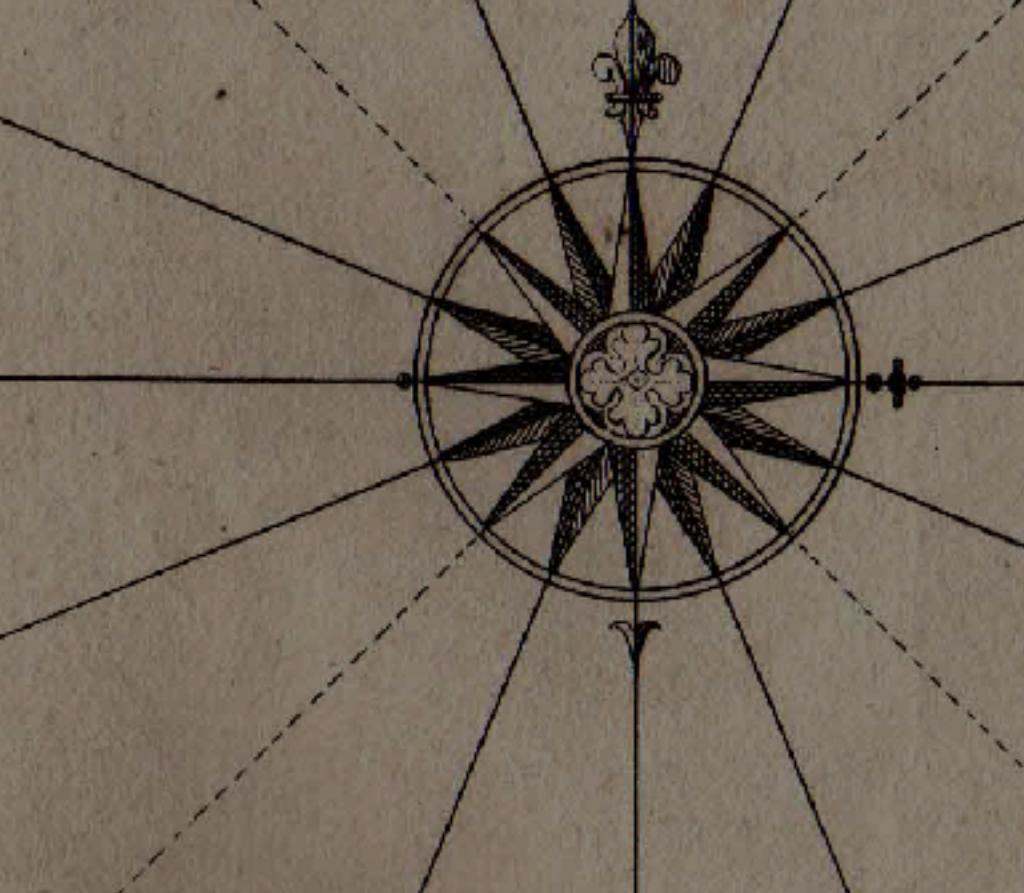


Nota

U's *Interieur* *du Pays* *et le Cours*
des Rivieres *ne sont pas connus:*
't *Binnenste des Lands*
en den Loop der
Rivieren, *zyn*
niet bekend.

A historical map of the coast of Malaguette, showing the town of Monou and surrounding landmarks. The map is oriented with the coast line running roughly from the bottom left to the top right. Key features include the town of Monou, the River St. Jean, the River St. Pedro, and the River Basse. The map also shows the 'Pays de [Land van] Monou' and the 'Coste de Malaguette ou du Poervre'. The text on the map is in French and Dutch, with some place names in their original language. The map is framed by a decorative border.

Les Cartes Angloises marquent
ici la Riviere de St. Marie;
De Engelsche Kaarten plaatsen
hier de Rivier St. Maria.

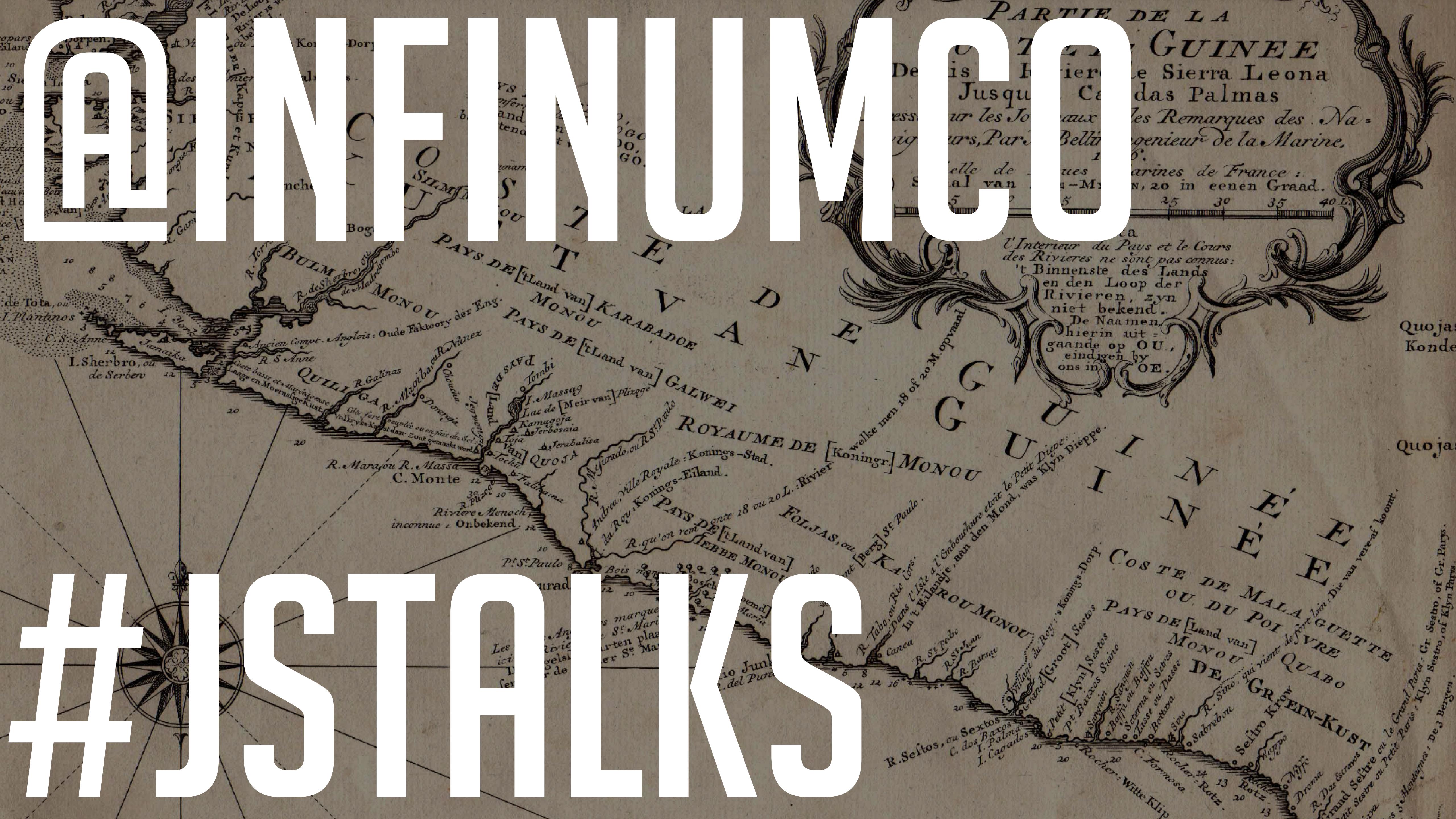


SOOKIANS

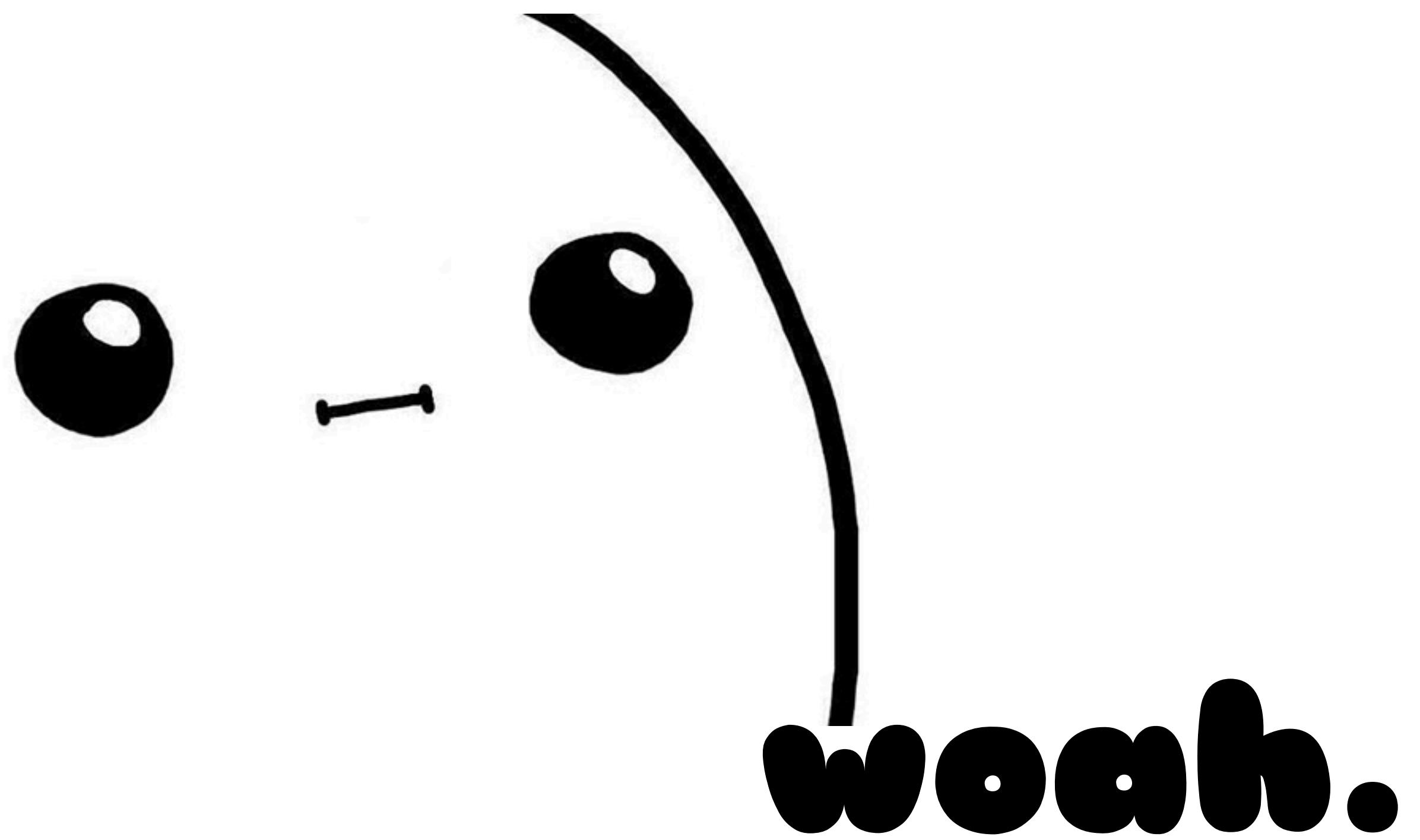


HISTRIKS

ANFINUMO

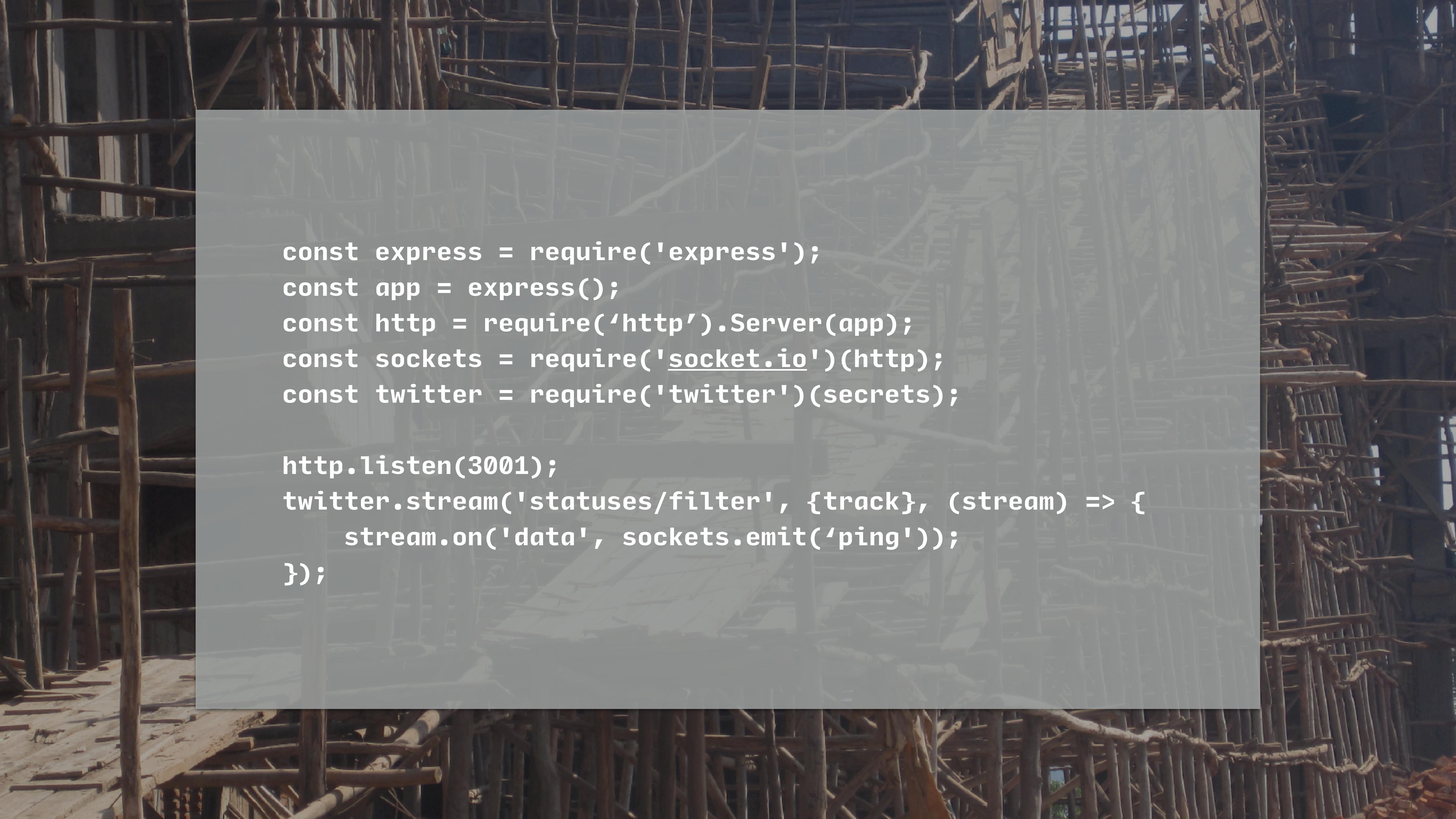








SERVER



```
const express = require('express');
const app = express();
const http = require('http').Server(app);
const sockets = require('socket.io')(http);
const twitter = require('twitter')(secrets);

http.listen(3001);
twitter.stream('statuses/filter', {track}, (stream) => {
  stream.on('data', sockets.emit('ping'));
});
```

A dense, intricate structure of wooden scaffolding and beams, likely a ship's hull under construction, with sunlight filtering through the gaps.

CLIENT



```
const sockets = io();
sockets.on('ping', (event) => {
  console.info('Event from server!', event);
  // move the robot? 😊
});
```



WEB BLUETOOTH

1. FIND A DEVICE



1. FIND A DEVICE

```
navigator.bluetooth.requestDevice({  
  filters: [{namePrefix: ['BB']}],  
  optionalServices: [ /* ... */ ]  
});
```



1. FIND A DEVICE
2. CONNECT

1. FIND A DEVICE

2. CONNECT

```
navigator.bluetooth.requestDevice({  
  filters: [{namePrefix: ['BB']}],  
  optionalServices: [ /* ... */ ]  
}).then((device) => {  
  console.log('Got device: ' + device.name);  
  return device.gatt.connect();  
});
```

- 
1. FIND A DEVICE
 2. CONNECT
 3. SEND COMMANDS

1. FIND A DEVICE

2. CONNECT

3. SEND CUMMINGS

DID	CID	SEQ	DLEN	Speed	Heading	Heading	STATE
02h	30h	<any>	05h	<val>	<msb>	<lsb>	<val>

REAL LIFE



REAL LIFE

OPERA SOFTWARE/BB8



```
document.querySelector('.js-connect')
  .addEventListener('click', () => connect());

roll(FRONT, SLOW, 1);
roll(LEFT, SLOW, 1);
roll(BACK, FAST, 1);
```

A photograph of a long, straight asphalt road stretching into the distance through a desert landscape. The road is marked with a double yellow line. To the left, there is a dry, brown hillside with sparse, low-lying vegetation. A chain-link fence runs along the base of the hill. A yellow diamond-shaped road sign with a black arrow pointing right is visible on the left side of the road. In the background, there are several low, rocky mountains under a clear, blue sky.

dance, monkey



dance, monkey

```
function sleep(seconds) {  
  return new Promise((resolve) => {  
    setTimeout(() => resolve(), seconds * 1000);  
  });  
  
async function doAction(actions) {  
  for (let action of actions) {  
    const {length, direction, speed} = action;  
    roll(direction, speed, 1);  
    await sleep(length);  
  }  
  stopRolling();  
  await sleep(2);  
}
```



```
const moves = [{  
  length: 10,  
  direction: FRONT,  
  speed: SLOW * 2  
}];
```

```
doAction(moves);
```



problems?



A photograph of a long, straight asphalt road stretching into the distance through a dry, hilly landscape under a clear blue sky. The road is marked with a double yellow line. The surrounding terrain is arid with sparse, dry vegetation. In the background, there are low, rocky mountains. The overall scene conveys a sense of vastness and isolation.

problems?
quite a few.







420

Enhance Your Calm: Returned by the Twitter Search and Trends API when the client is being rate limited. Likely a reference to this number's association with marijuana



420

Enhance Your Calm: Returned by the Twitter Search and Trends API when the client is being rate limited. Likely a reference to this number's association with marijuana

anyways...

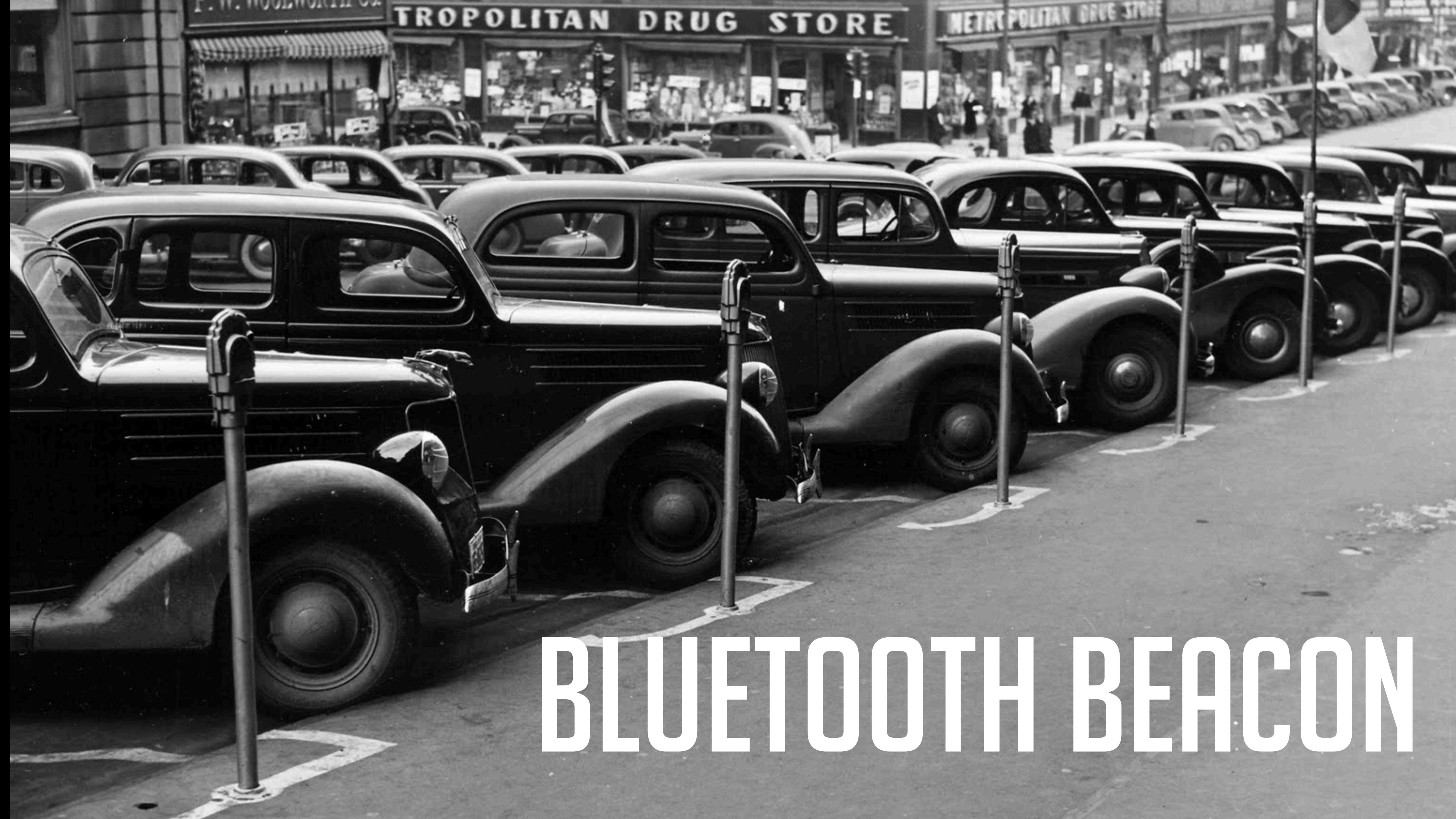




PARKING METER



SHOPPING MALL



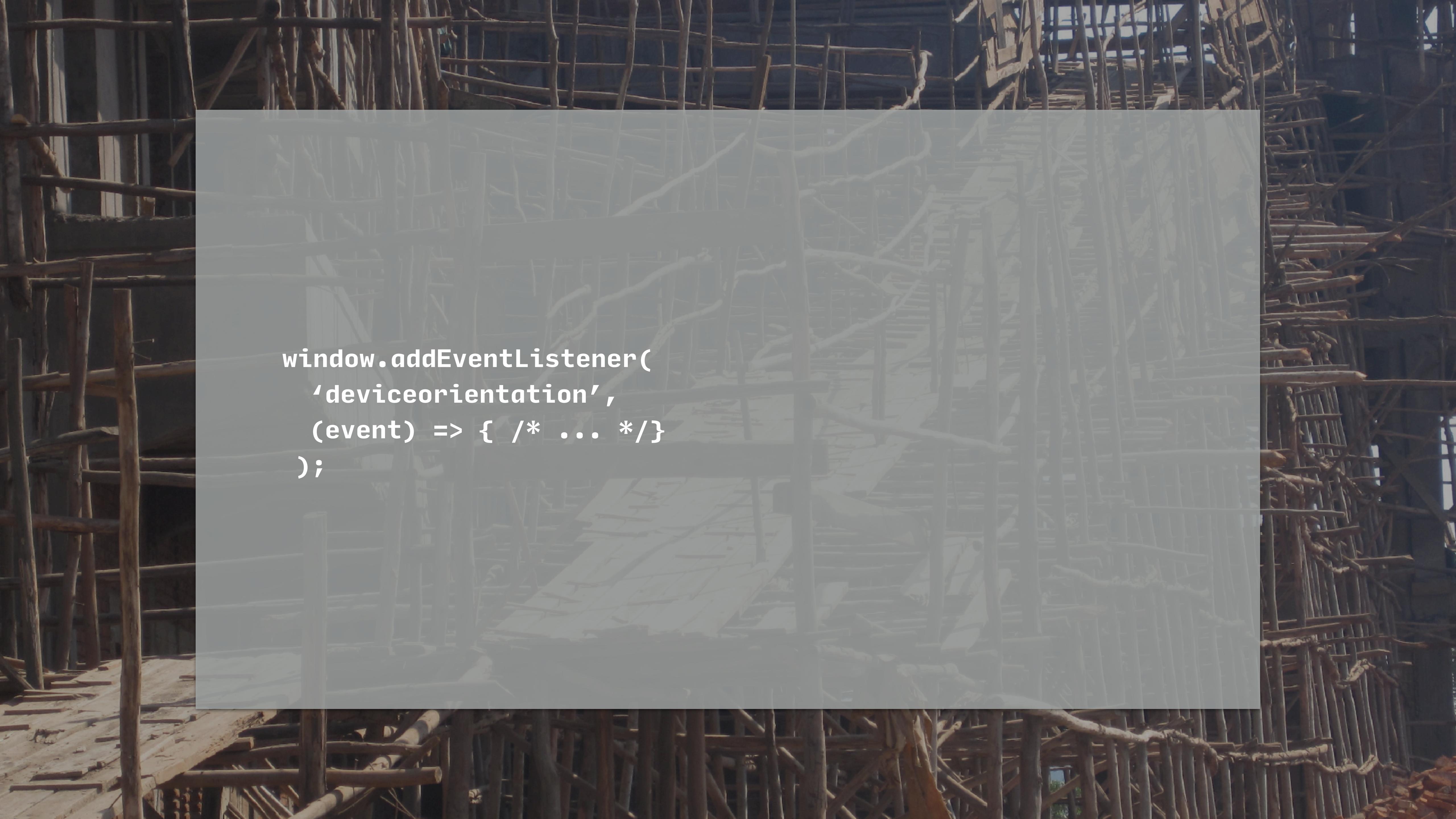
BLUETOOTH BEACON



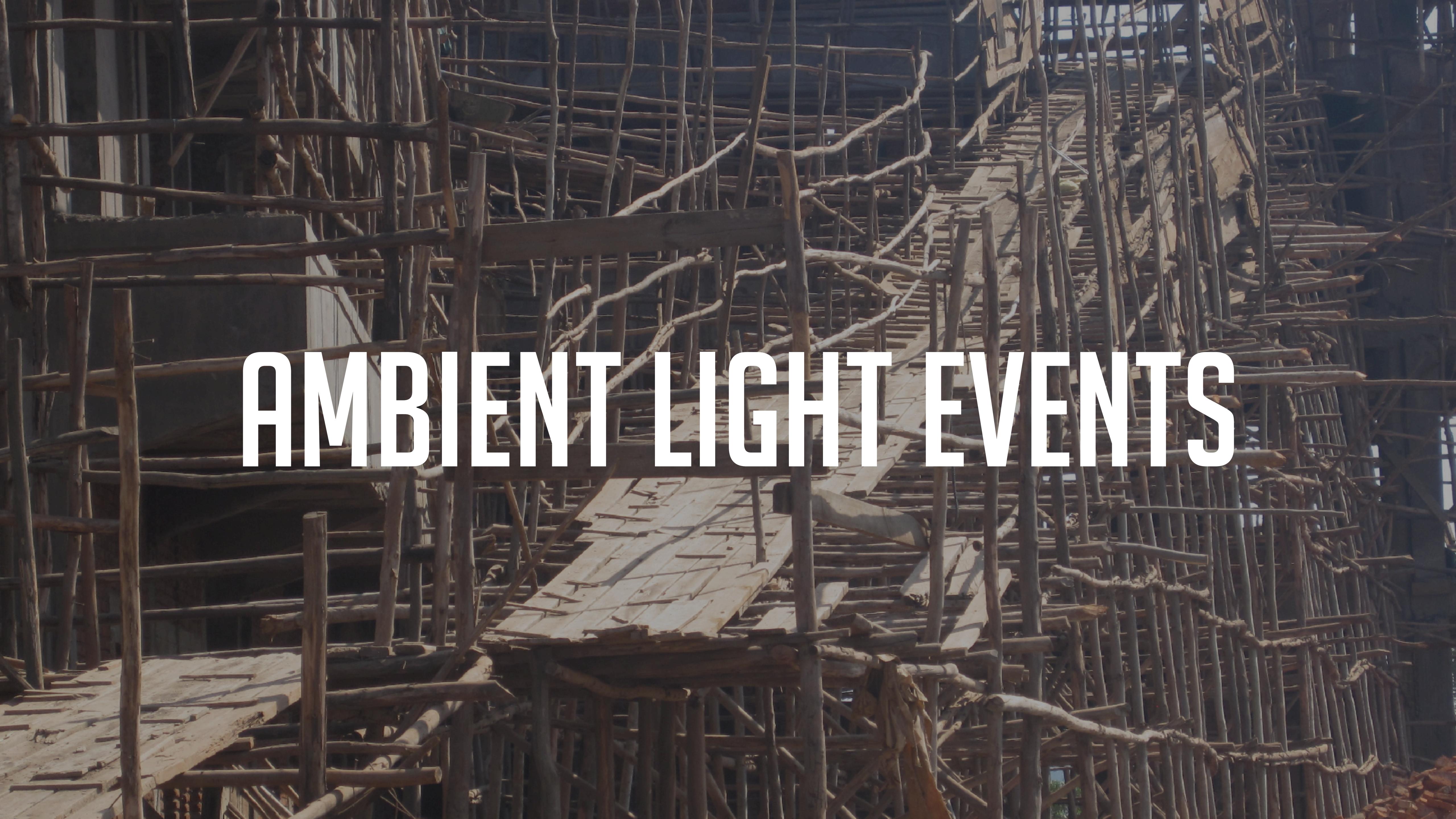
WHAT NEXT?



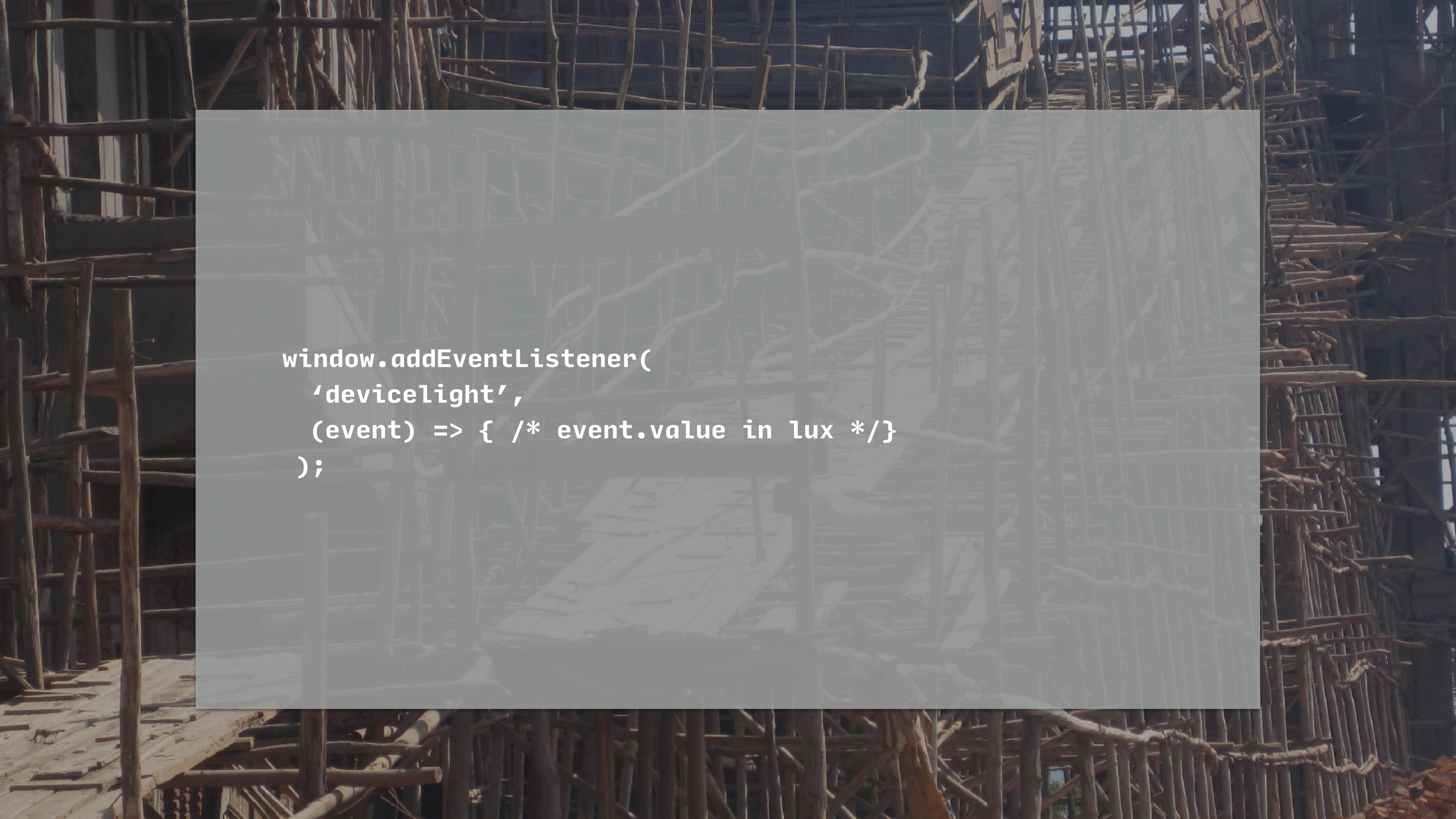
ORIENTATION API



```
window.addEventListener(  
  'deviceorientation',  
  (event) => { /* ... */}  
);
```



AMBIENT LIGHT EVENTS



```
window.addEventListener(  
  'devicelight',  
  (event) => { /* event.value in lux */}  
);
```



SPEACH API

A large, complex structure made of wooden poles and bamboo scaffolding, possibly a traditional building under construction or a large-scale model. The structure is composed of numerous vertical and horizontal poles, creating a dense, grid-like pattern. The lighting is dramatic, with strong shadows and highlights that emphasize the texture of the wood and bamboo. The overall appearance is one of a traditional, perhaps ancient, architectural style.

```
const recognition = new SpeechRecognition();
const speechRecognitionList = new SpeechGrammarList();
speechRecognitionList.addFromString(grammar, 1);
recognition.grammars = speechRecognitionList;
recognition.start();

recognition.onresult = (event) => { /* ... */ }
```



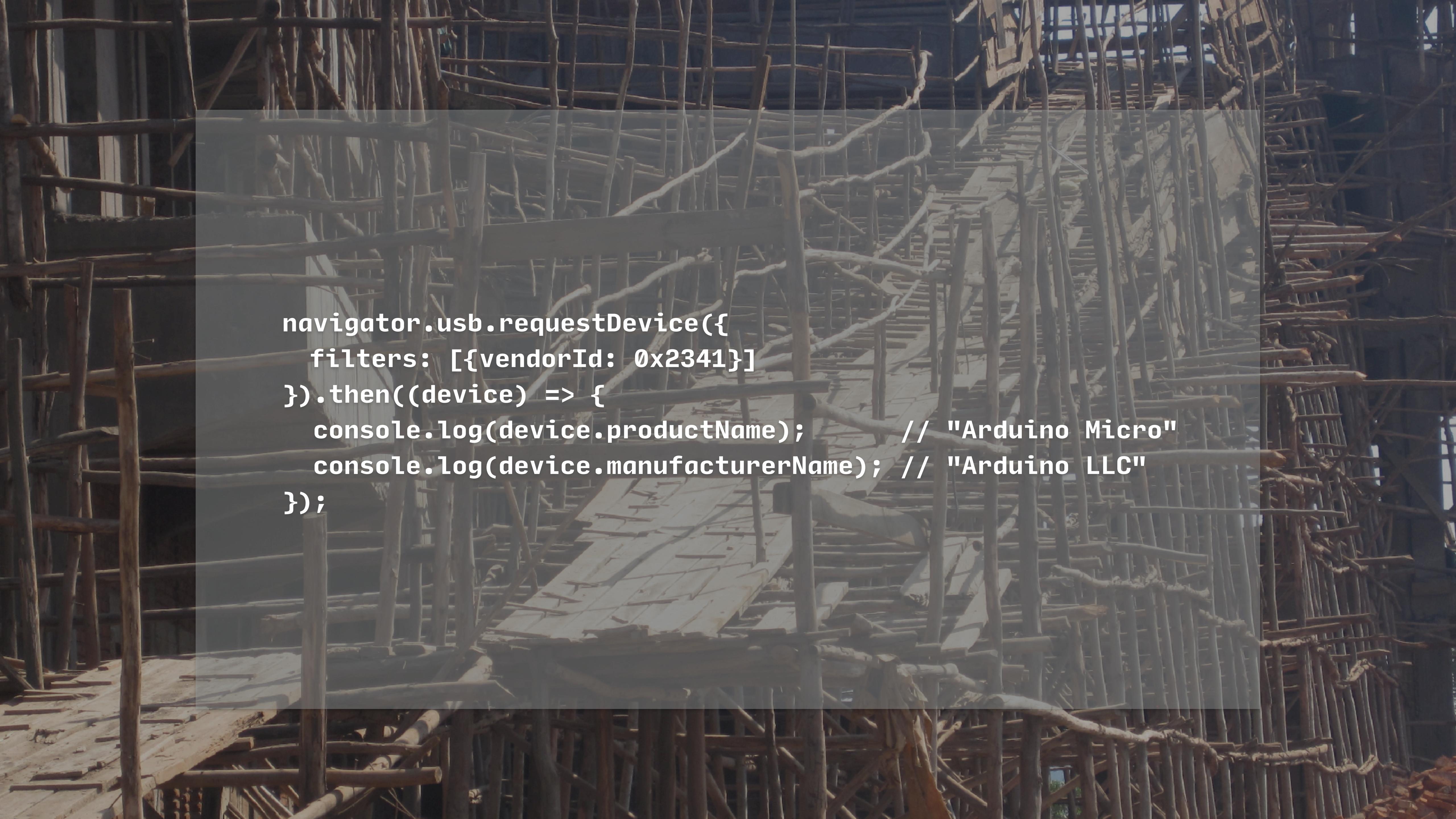
EVEN MORE EXPERIMENTAL



WEB NFC



WEB USB

A large, complex wooden structure under construction, possibly a boat or a bridge, with many vertical and horizontal wooden beams and ladders.

```
navigator.usb.requestDevice({
  filters: [{vendorId: 0x2341}]
}).then((device) => {
  console.log(device.productName);      // "Arduino Micro"
  console.log(device.manufacturerName); // "Arduino LLC"
});
```



EVEN MORE?!

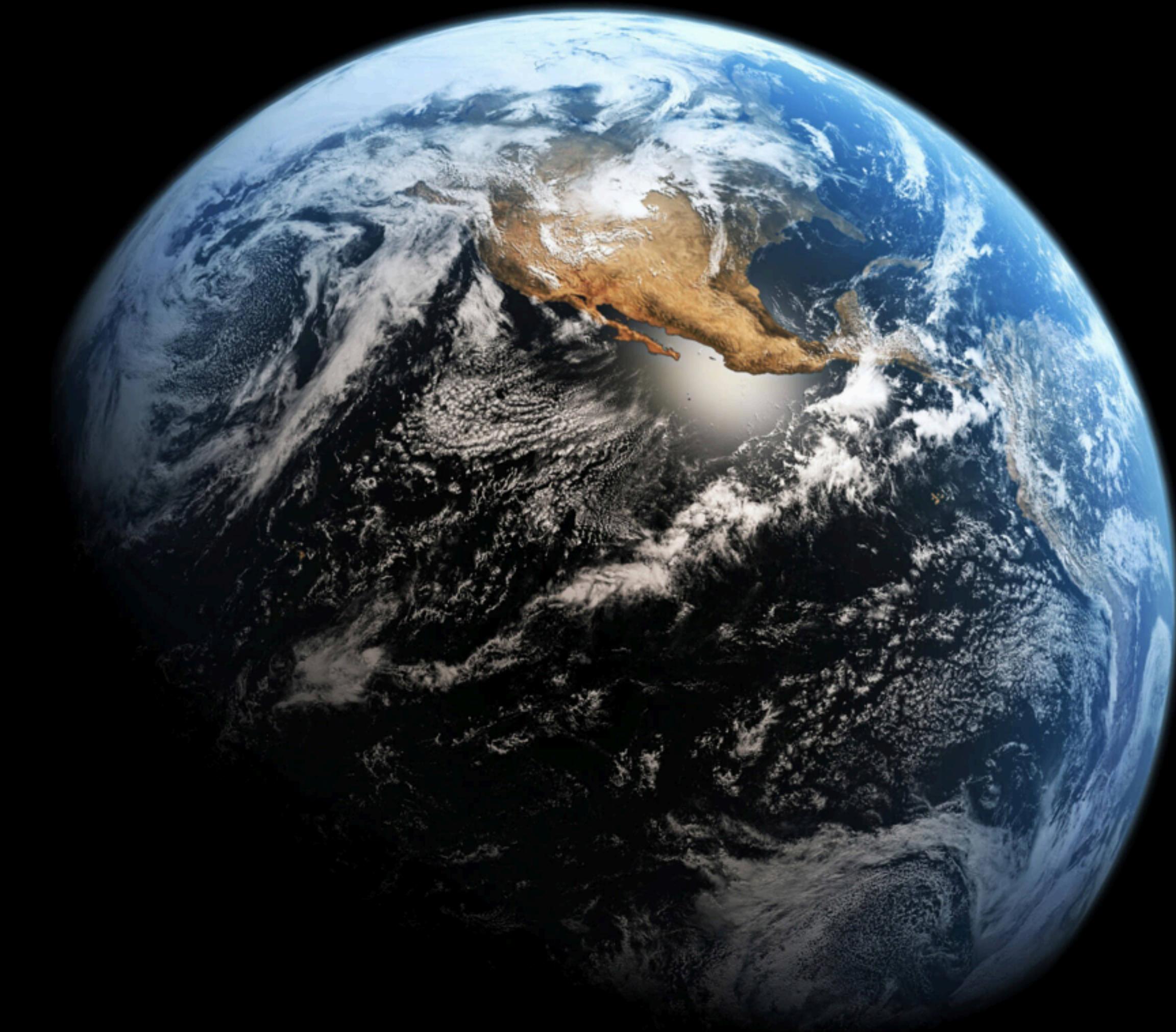


EVEN MORE?!
just stop...



J5

JOHNNY-FIVE





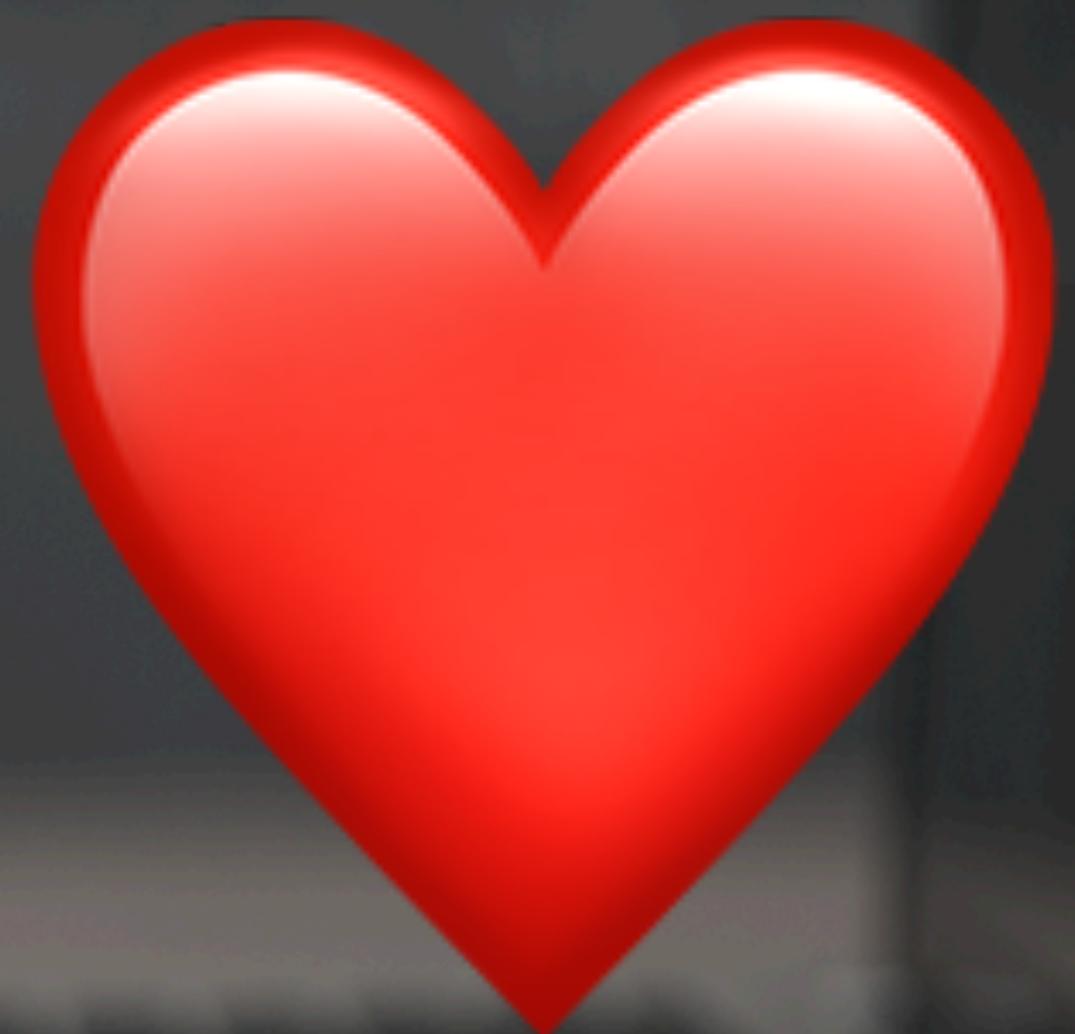
FUTURE.



**FUTURE.
2-4 YEARS?**



THANKS



Q&A?

1. [https://github.com/orbotix/DeveloperResources/blob/
master/docs/Sphero_API_1.50.pdf](https://github.com/orbotix/DeveloperResources/blob/master/docs/Sphero_API_1.50.pdf)
2. <https://github.com/andreicek/bb8>
3. <http://johnny-five.io/>
4. [https://developers.google.com/web/updates/2015/07/
interact-with-ble-devices-on-the-web](https://developers.google.com/web/updates/2015/07/interact-with-ble-devices-on-the-web)
5. <https://www.chromestatus.com/features/6261030015467520>