

Exploring the potential  
of the Web Speech API in

---



KARAOKE

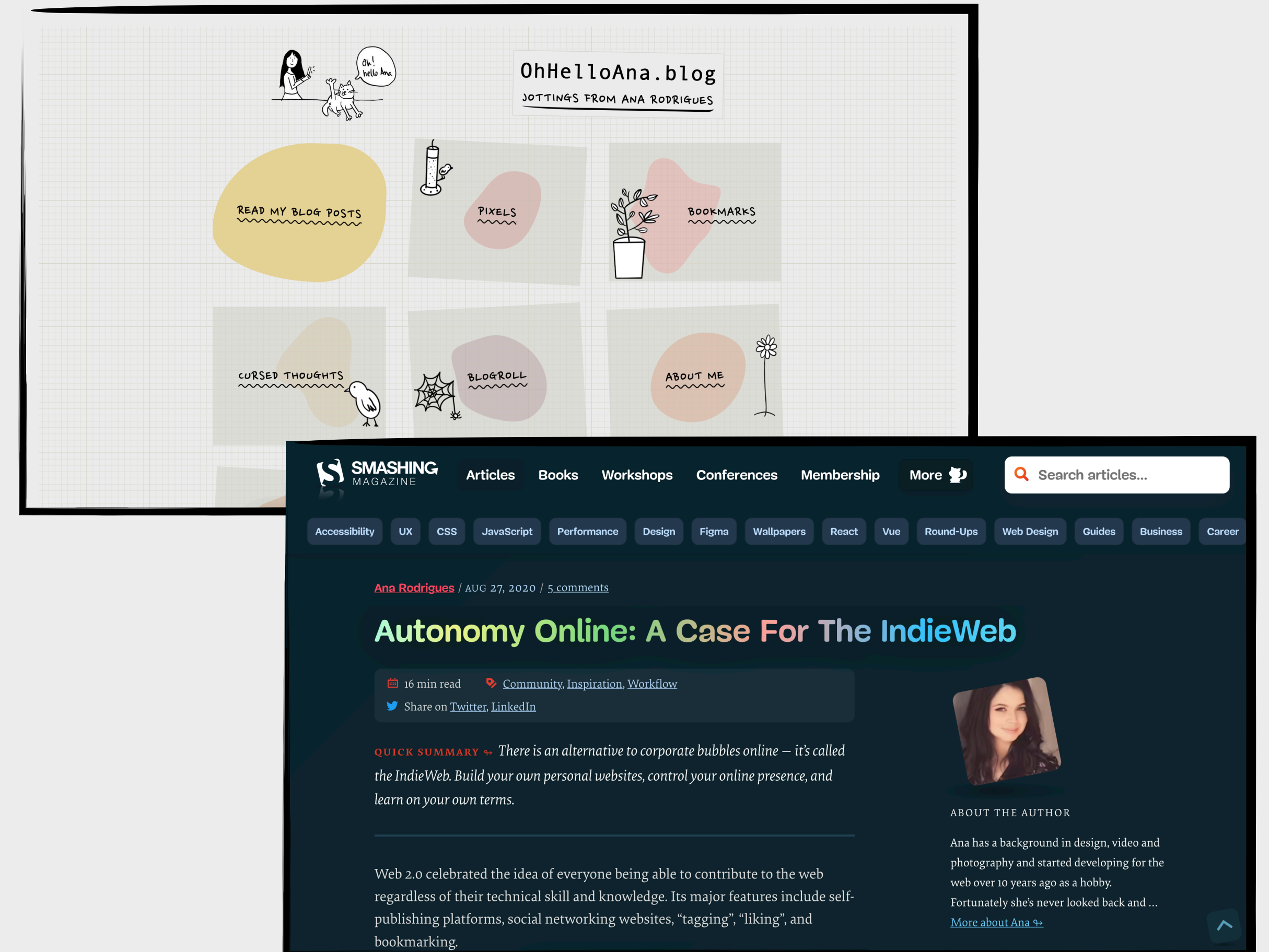
---

# Oh Hello!

I work as a front-end developer at [hactar.is](https://hactar.is).

I spend most of my free time on my blog.

I participate in the IndieWeb community.



# Oh Hello!

I do not represent any browser vendor.

I haven't been to Karaoke since before the pandemic.

I am a big fan of The Rasmus (not a stan).




INTERNET ARCHIVE <http://www.therasmus.com/> Go MAY JUN AUG 2003 2004 2005 About this capture

Wayback Machine 1,109 captures 15 May 2001 - 9 Nov 2023

**The Rasmus**

SCRAPBOOK DISCOGRAPHY PHOTOS EXTRAS  
BIOGRAPHY GUESTBOOK CONTACT INFORMATION

**Events**  
2004.04.05 IN THE SHADOWS - UK release date  
[View older events](#)



**Download now!**

Snippets from the new album:  
[In The Shadows](#)  
[First Day of My Life](#)  
[Guilty](#)  
[In My Life](#)  
[Still Standing](#)

[What Ever](#) - Extra track on the future single!

**Join The Rasmus Online Team**

The Rasmus are making waves in the U.S. with the release of the album Dead Letters, and the band needs your help to spread the word! Join The Rasmus Online Team to help break the band in the U.S. In exchange for your hard work and support, you'll be eligible to win great prizes from the band, receive exclusive content and news, and more! To join, simply click the link below and get ready for the action to begin! <http://www.rasmusdeadletters.com/team>

11.06.2004 -17:58:56

**UPDATED TOUR SCHEDULE**

New tour schedule, including new dates in Austria, Belgium and Turkey. Updated June 11th

- 13.06 ITALY Bologna - Flipout Festival
- 25.06 UK London - Astoria
- 26.06 UK London - Astoria
- 02.07 SWEDEN Skellefteå festival
- 03.07 BELGIUM Werchter Festival
- 09.07 SWEDEN Sundsvall - Gatufest
- 10.07 SWITZERLAND Zurich - Outside Festival
- 11.07 FINLAND Turku - Ruisrock
- 01.08 FINLAND Vantaa - Ankkarock
- 04.08 SWEDEN Göteborg - Liseberg
- 07.08 HUNGARY Budapest - Sziget Festival
- 08.08 AUSTRIA Castle Clam
- 14.08 GERMANY Hamburg - Astra Fest
- 15.08 BELGIUM Leuven - City Festival
- 20.08 SWITZERLAND Mont Soleil Festival
- 21.08 SWITZERLAND Gampel Open Air
- 22.08 TURKEY Istanbul



I had a problem that I  
needed to fix

**Whenever I went karaoke,  
they only had "In the Shadows" available.**

What if we had more than  
just lyrics on a screen?

What if we could gamify  
the experience?



speech to text

Help Spread DuckDuckGo! 🔊

All Images Videos News Maps Shopping Settings

United Kingdom Safe search: moderate Any time

notta.ai | Report Ad

**Notta-speech to text | speech to text** AD

Efficient and reliable recording transcription tool. Keep your hands free and your mind engaged with our voice-to-text solution  
 安心のセキュリティ体制・各業界大手の導入事例多数・無料トライアル可能・7日間無料トライアル付き

**AI Transcription for MP4**  
 Transcription With One Click Easily  
 Transcribe Your Meeting

**Transcription for Teams**  
 Transcription With One Click Easily  
 Transcribe Your Meeting

**Transcription for GMeet**  
 Transcription With One Click Easily  
 Transcribe Your Meeting

pega.com | Report Ad

**Offer Speech to Text Service | Time to Try Conversational AI?** AD

Automate your way to better customer service and improved experiences for your agents. Transform your contact center. Offer streamlined service with voice recognition software.

PegaWorld iNspire Replays · PegaWorld 2023 Replays · Watch a Demo · AI Survey

https://speechnotes.co

**Free Speech to Text Online, Voice Typing & Transcription**

Speechnotes is a web-based tool that lets you take notes with your voice, or automatically transcribe audio and video recordings. It offers fast, accurate and private transcription, as well as features like voice commands, automatic capitalization, and integration with other apps and services.

**Sign in**  
 Speech to Text online notepad.  
 Professional, accurate & free speech...

**Transcribe**  
 Speechnotes dictation utilizes the built-in speech recognition tools provided b...

**How to**  
 Automatic Transcription for Recorded Audio, Video & YouTubes - User Guide...

**New API & Zapier Integration**  
 Webhooks - Hands On Guide.  
 Speechnotes will send transcription...

**Earn Money From Our Affiliates ...**  
 Speechnotes Files Affiliate Program.  
 Earn 10% commission on every sale...

**Extract Audio From Videos**  
 Copy speechnotes\_audio\_extractor.bat  
 Download speechnotes\_audio\_extractor.bat

**Speech recognition**

Speech recognition is an interdisciplinary subfield of computer science and computational linguistics that develops methodologies and technologies that enable the recognition and translation of spoken language into text by computers. It is also known as automatic speech recognition, computer speech recognition or speech to text. [Wikipedia](#)

[Share Feedback](#)

voicetyper.com

**Windows Speech To Text App | Speak Text Into Any Text Field** AD

Save Lots of Time by Typing With Your Voice at 99% Accuracy. Works in ALL Applications. Takes Zero Training. 5x Faster than Typing. Install in Seconds. 66 Languages. Try For Free

[Share Feedback](#)

So let's talk about the  
Web Speech API

**In particular, the speech recognition.**



## Speech Input API Specification

Editor's Draft 18 October 2010

**Latest Editor's Draft:**

<http://dev.w3.org/...>

**Editors:**

Satish Sampath, Google Inc.

Bjorn Bringert, Google Inc.

Copyright © 2010 W3C® (MIT, ERCIM, Keio), All Rights Reserved. W3C [liability](#), [trademark](#) and [document use](#) rules apply.

### Abstract

This specification extends HTML and defines an API that provides speech recognition and input to web pages.

### Status of This Document

*This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest technical report can be found in the [W3C technical reports index](http://www.w3.org/TR/) at <http://www.w3.org/TR/>.*

This document is an API proposal from Google Inc. to the [HTML Speech Incubator Group](#). If you wish to make comments regarding this document, please send them to [public->\(subscribe, archives\)](#).

All feedback is welcome.





**“Safari” Would Like to Access  
Speech Recognition.**

Speech data from this app will be sent to Apple to process your requests. This will also help Apple improve its speech recognition technology.

Websites you visit may access speech recognition.

Don't Allow

OK

**i** **Note:** On some browsers, like Chrome, using Speech Recognition on a web page involves a server-based recognition engine. Your audio is sent to a web service for recognition processing, so it won't work offline.

Filter

## api.SpeechRecognition

[Report problems with this compatibility data on GitHub](#)

### Web Speech API

Guides

Using the Web Speech API

Interfaces

SpeechGrammar

SpeechGrammarList

SpeechRecognition

SpeechRecognitionAlternative

SpeechRecognitionErrorEvent

SpeechRecognitionEvent

SpeechRecognitionResult

SpeechRecognitionResultList

SpeechSynthesis

SpeechSynthesisErrorEvent

SpeechSynthesisEvent

SpeechSynthesisUtterance

SpeechSynthesisVoice

|   | Desktop |         |         |         |           | Mobile         |                     |               |               |                  |                 |
|---|---------|---------|---------|---------|-----------|----------------|---------------------|---------------|---------------|------------------|-----------------|
|   | Chrome  | Edge    | Firefox | Opera   | Safari    | Chrome Android | Firefox for Android | Opera Android | Safari on iOS | Samsung Internet | WebView Android |
| <b>SpeechRecognition</b>                        | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✗*      | ✗*      |         | ✗*      | ✗         | ✗*             |                     | ✗*            | ✗             | ✗*               | ✗*              |
| <a href="#">SpeechRecognition() constructor</a> | ✓<br>33 | ✓<br>79 | ✗<br>No | ✗<br>No | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✗<br>No       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>37         |
|   | ✗       | ✗       |         |         | ✗         | ✗              |                     |               | ✗             | ✗                | ✗               |
| <a href="#">abort</a>                           | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
| <a href="#">audioend event</a>                  | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
| <a href="#">audiostart event</a>                | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
| <a href="#">continuous</a>                      | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
| <a href="#">end event</a>                       | ✓<br>33 | ✓<br>79 | ✗<br>No | ✓<br>20 | ✓<br>14.1 | ✓<br>33        | ✗<br>No             | ✓<br>20       | ✓<br>14.5     | ✓<br>2.0         | ✓<br>4.4.3      |
|   | ✓       | ✓       | ✗       | ✓       | ✓         | ✓              | ✗                   | ✓             | ✓             | ✓                | ✓               |

### In this article

Web Speech Concepts and Usage

Web Speech API Interfaces


Errors

Examples

Specifications

**Browser compatibility**

See also



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mozilla / standards-positions

Code Issues 247 Pull requests 12 Actions Projects Security Insights

# Web Speech API #170

Open adamopenweb opened this issue on Jun 22, 2019 · 44 comments

adamopenweb commented on Jun 22, 2019

## Request for Mozilla Position on an Emerging Web Specification

- Specification Title: Web Speech API - SpeechRecognition API
- Specification or proposal URL: <https://w3c.github.io/speech-api/>
- Caniuse.com URL (optional): <https://caniuse.com/#search=SpeechRecognition>
- Bugzilla URL (optional): [https://bugzilla.mozilla.org/show\\_bug.cgi?id=1248897](https://bugzilla.mozilla.org/show_bug.cgi?id=1248897)
- Mozillians who can provide input (optional): [@martinthomson](#) [@jan-ivar](#)

### Other information

- Is this spec good for the web?
- Is it the right thing to put it in the browser?

1

martinthomson commented on Jun 22, 2019

Member

At a high level, the ability to access speech recognition and synthesis capabilities on the web is reasonable. Providing access to speech can do a lot to improve agency and accessibility on the web, and I don't see any significant problems with providing platform features that improve that. Much of these capabilities are already available through existing APIs,

Assignees  
No one assigned

Labels  
under review w3c-cg

Projects  
None yet

Milestone  
No milestone

Development  
No branches or pull requests

Notifications Customize  
Subscribe  
You're not receiving notifications from this thread.

15 participants

# Demo

```
<div class="controls">  
  <button id="play">Start</button>  
  <button id="stop">Stop</button>  
</div>
```

play>

```
<script type="text/javascript" src="karaoke.js"></script>
```



```
<div class="controls">  
  <button id="play">Start</button>  
  <button id="stop">Stop</button>  
</div>
```

```
<div class="realTimeTranscription">  
</div>
```

play>

```
<script type="text/javascript" src="karaoke.js"></script>
```

```
<div class="controls">  
  <button id="play">Start</button>  
  <button id="stop">Stop</button>  
</div>
```

```
<div class="realTimeTranscription">  
</div>
```

```
<audio id="myAudio" class="karaoke__audio" preload="auto" autoplay>  
  <source src="song.mp3" type="audio/mpeg"/>  
  <p>Your browser does not support the audio element.</p>  
</audio>
```

```
<script type="text/javascript" src="karaoke.js"></script>
```

```
<div class="controls">  
  <button id="play">Start</button>  
  <button id="stop">Stop</button>  
</div>
```

```
<div class="realTimeTranscription">  
</div>
```

```
<audio id="myAudio" class="karaoke__audio" preload="auto" autoplay>  
  <source src="song.mp3" type="audio/mpeg"/>  
  <p>Your browser does not support the audio element.</p>  
</audio>
```

```
<ul id="lyrics" class="karaoke__lyrics"></ul>  
<script type="text/javascript" src="karaoke.js"></script>
```

Start

Stop



```
window.SpeechRecognition = window.SpeechRecognition || window.webkitSpeechRecognition;

const recognition = new SpeechRecognition();
recognition.interimResults = true;
recognition.lang = 'en-GB';
recognition.continuous = false;

let p = document.createElement('p');
const realTimeTranscription = document.querySelector('.realTimeTranscription');
realTimeTranscription.appendChild(p);

let transcript;

recognition.addEventListener('result', e => {
  transcript = Array.from(e.results)
    .map(result => result[0])
    .map(result => result.transcript)
    .join('');

  p.textContent = transcript;

  if (e.results[0].isFinal) {
    p = document.createElement('p');
    realTimeTranscription.appendChild(p);
  }
});

recognition.addEventListener('end', recognition.start);
```

```
window.SpeechRecognition = window.SpeechRecognition || window.webkitSpeechRecognition;
```

```
const recognition = new SpeechRecognition();  
recognition.interimResults = true;  
recognition.lang = 'en-GB';  
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    .map(result => result[0])  
    .map(result => result.transcript)  
    .join('');
```

```
  p.textContent = transcript;
```

```
  if (e.results[0].isFinal) {  
    p = document.createElement('p');  
    realTimeTranscription.appendChild(p);  
  }  
});
```

```
recognition.addEventListener('end', recognition.start);
```

```
var lyrics = [  
  { text: "Twinkle twinkle little star", start: "5", end: "11.2" },  
  { text: "How I wonder what you are", start: "11.9", end: "17" },  
  { text: "Up above the world so high", start: "17.7", end: "23.1" },  
  { text: "Like a diamond in the sky", start: "23.3", end: "29.2" },  
  { text: "Twinkle twinkle little star", start: "30", end: "35.1" },  
  { text: "How I wonder what you are", start: "35.5", end: "42" }  
];
```

# What is happening here?

- When the speech recognition is initiated, the song will also start.
- We'll check if the current time falls between the start and end of that lyric line.
- If yes, let's add a class showing that it is the current lyric line.



```
startbtn.addEventListener("click", () => {
  recognition.start();
  music.play().then(() => {
    music.addEventListener("timeupdate", (e) => {
      lyrics.forEach((songLine, index) => {
        tempTranscript = transcript;
        var currentLine = lyricsList.children[index].firstChild;

        if (e.target.currentTime >= songLine.start &&
            e.target.currentTime <= songLine.end) {
          currentLine.classList.add("karaoke_lyrics-item--
selected");
          window['line'+index] = tempTranscript;
        }

        //...
      });
    });
  });
});
```

```
startbtn.addEventListener("click", () => {  
  recognition.start();  
  music.play().then(() => {  
    music.addEventListener("timeupdate", (e) => {  
      lyrics.forEach((songLine, index) => {  
        tempTranscript = transcript;  
        var currentLine = lyricsList.children[index].firstChild;  
  
        if (e.target.currentTime >= songLine.start &&  
            e.target.currentTime <= songLine.end) {  
          currentLine.classList.add("karaoke_lyrics-item--  
selected");  
          window['line'+index] = tempTranscript;  
        }  
  
        //...  
      }  
    }  
  }  
});
```

- If the current time is bigger than the “end” time of a lyric line, add a class that marks it as the past.
- Once that line is in the “past” let’s do some checks.

# So what's the verdict?

- Okay for small voice notes;
- Not perfect for singing;
- Unlikely to be okay for rap;



The video player shows a stage presentation with a large audience. The main title 'Beats, Rhymes and Unit Tests' is overlaid in large white text. Below the video, the speaker's name 'Tony Edwards' is displayed in a red, italicized font. A circular logo with a red heart and 'JS' is positioned to the left of the name. The video title 'Tony Edwards - Beats, Rhymes and Unit Tests - Frontend Love 2020' is shown below the video frame. The channel name 'JSWORLD Conference' with 10.3K subscribers and a 'Subscribe' button are on the left. Interaction buttons for 'Like' (1), 'Dislike', 'Share', 'Download', 'Clip', and 'More' are on the right.

# Beats, Rhymes and Unit Tests

Frontend Love  
Beats, Rhymes and Unit Tests  
Tony Edwards  
Education Outreach at Software Cornwall

**Tony Edwards**

JSWORLD Conference  
10.3K subscribers

Subscribe

Like 1 Dislike Share Download Clip More

[https://www.youtube.com/watch?v=x\\_L1eQT6TyA](https://www.youtube.com/watch?v=x_L1eQT6TyA)



10 Dec 22

# Web Speech API

Learn how to listen to and respond to speech in your application using the Web Speech API.

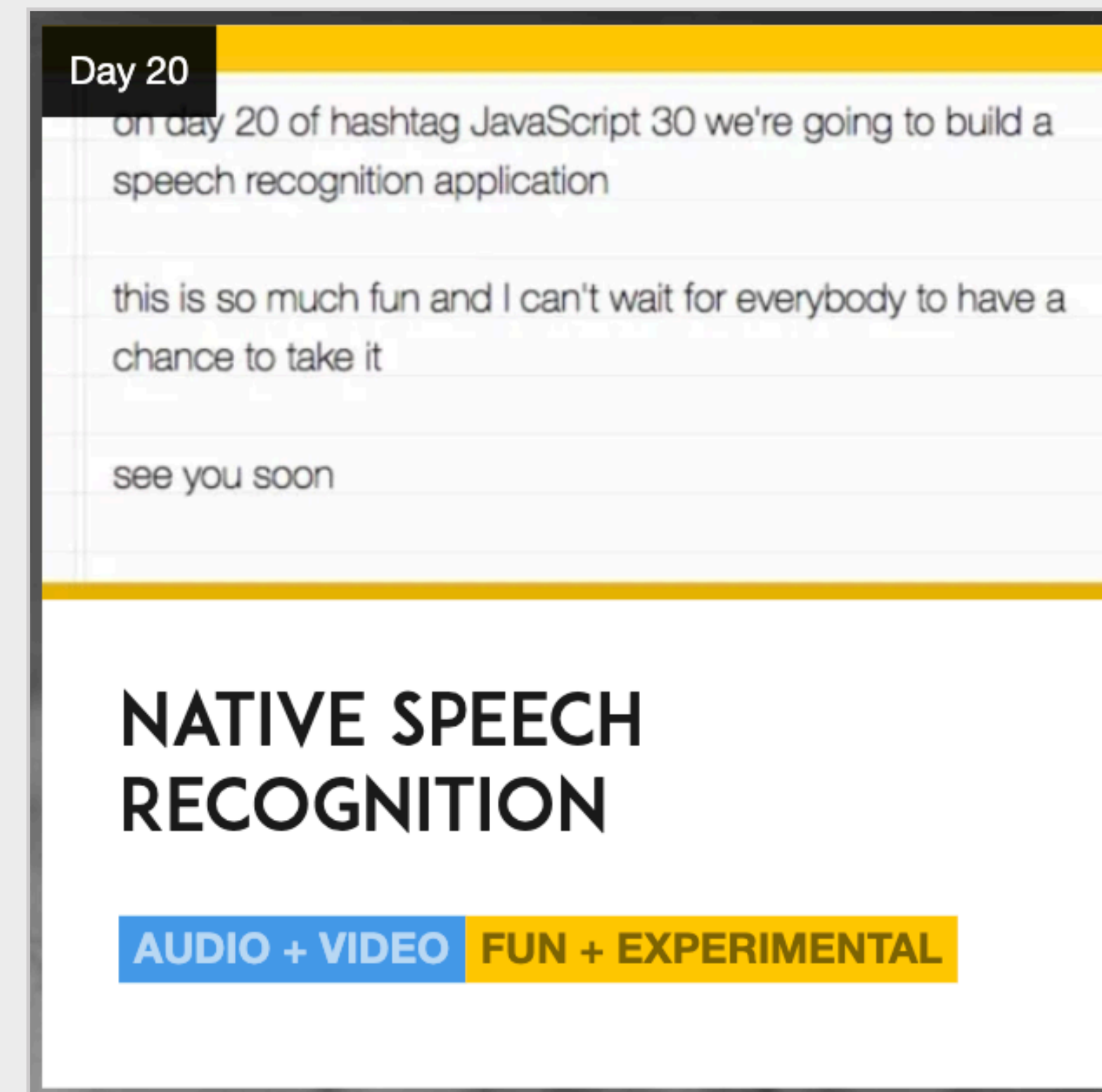
By  Stephanie Eckles

Did you know your browser has speech recognition capabilities? (Well, [except Firefox for now](#)).

Similar to [the MediaStreams API we learned on Day 6](#), this API will trigger a prompt to get the user's permission to listen to their microphone. Then we can set up logic to recognize

**By Stephanie Eckles**

<https://12daysofweb.dev/2021/speech-api/>



Day 20

on day 20 of hashtag JavaScript 30 we're going to build a speech recognition application

this is so much fun and I can't wait for everybody to have a chance to take it

see you soon

# NATIVE SPEECH RECOGNITION

AUDIO + VIDEO FUN + EXPERIMENTAL

**By Wes Bos**

<https://javascript30.com>



**W** WEB CAPTIONER

# Web Captioner will sunset and be open sourced on October 31, 2023.

July 26, 2023  
By Curt Grimes

Web Captioner will sunset and stop operating on [October 31, 2023](#). You can [continue to access Web Captioner at https://webcaptioner.com](#).

Since its start in 2017, this project has provided a way for me to help people with about accessibility and provide some tools for developers.

As I promised in the past, if I were to sunset this project, the Web Captioner source available on my GitHub repository will be available on my GitHub repository on October 31, 2023 after Webcaptioner.com is sunset.

[GO TO WEB CAPTIONER](#) Available

<https://webcaptioner.com>

<https://github.com/ceuk/speech-recognition-aws-polyfill>

☰ README.md

## speech-recognition-aws-polyfill

bundlephobia inaccessible vulnerabilities no longer available npm v0.3.0

A [polyfill](#) for the experimental browser [Speech Recognition API](#) which falls back to [AWS Transcribe](#).

### Features

- Works without a server (browser-only)
- Supports the [following browsers/versions](#) (~94% coverage)

**Note:** this is not a polyfill for `MediaDevices.getUserMedia()` - check the support table in the link above.

### Who is it for?

This Library is a good fit if you are already using AWS services (or you would just prefer to use AWS).



A polyfill also exists at: [/antelow/speech-polyfill](#), which uses [Azure Cognitive Services](#) as a fallback. However, it seems to have gone stale with no updates for ~2 years.

### Prerequisites

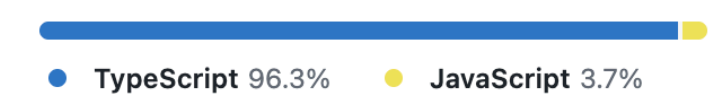
- An AWS account
- A [Cognito identity pool](#) (unauthenticated or authenticated) with the `TranscribeStreaming` permission.

### Setup Guide

1. In the AWS console, visit the [Cognito](#) section and click [Manage Identity Pools](#)

 ceuk CEUK  
 JamesBrill

### Languages



# What's next?

**I don't know but I would like to see these types of APIs grow as they open a world of FREE creative opportunities.**



**Common Voice**  
moz://a

CONTRIBUTE ▾ DATASETS LANGUAGES PARTNER ABOUT

♥ DONATE LOG IN / SIGN UP EN

## Speak

Donate your voice

Recording voice clips is an integral part of building our open dataset; some would say it's the fun part too.

[Have you read our Terms?](#)

Help us get to 1,200

Today's Progress  
**198** / 1200  
*Clips recorded*

## Listen

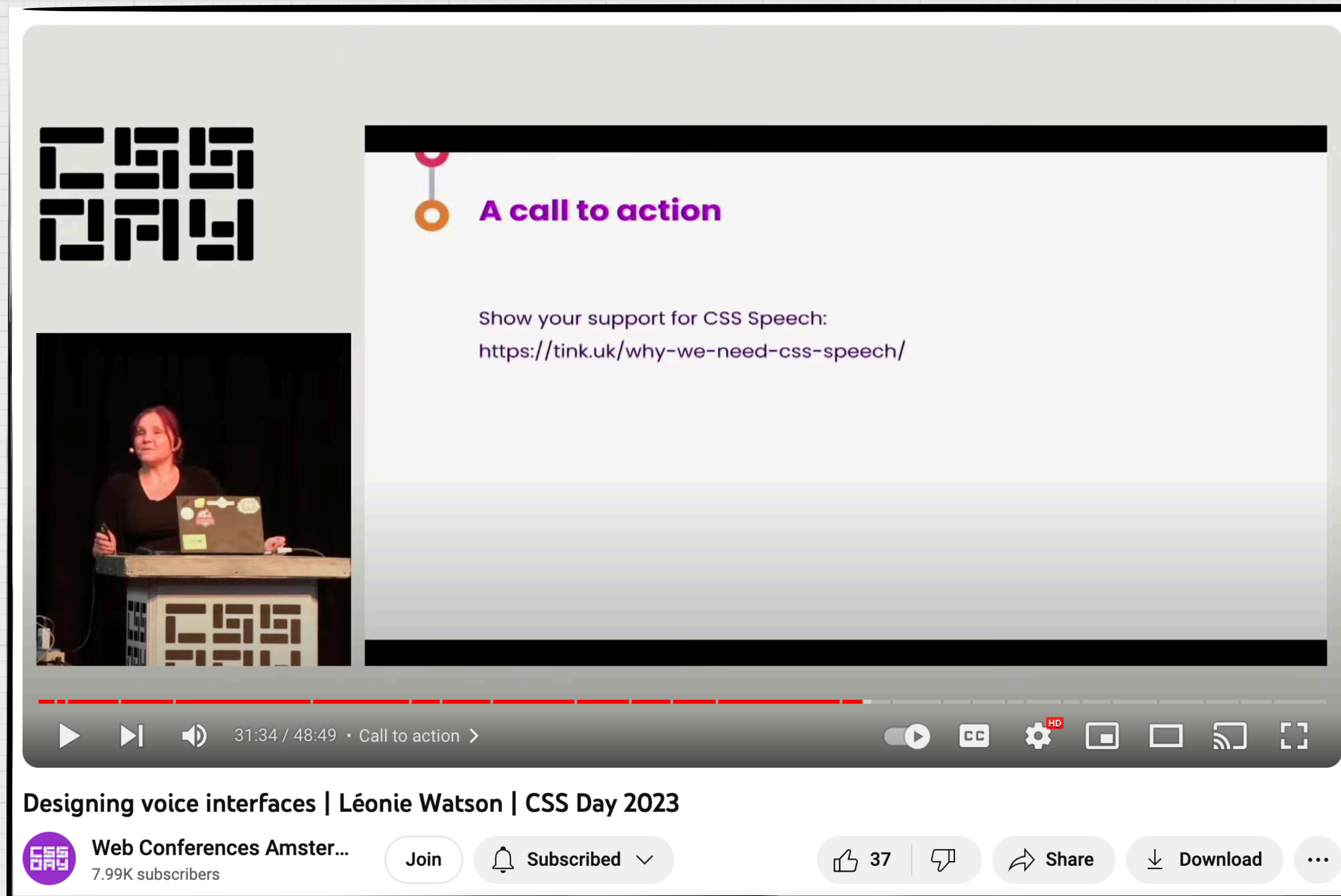
Help us validate voices

**Mozilla Common Voice is an initiative to help teach machines how real people speak.**

Voice is natural, voice is human. That's why we're excited about creating usable voice technology for our machines. But to create voice systems, developers need an extremely large amount of voice data.

Most of the data used by large companies isn't available to the majority of people. We think that stifles innovation. So we've launched Common Voice, a project to help real voices

<https://commonvoice.mozilla.org/en>



The video player displays a presentation slide with the following content:

- Logo:** A stylized 'CSS' logo in the top left corner.
- Title:** "A call to action" in purple text, preceded by a vertical line with a pink circle at the top and an orange circle at the bottom.
- Text:** "Show your support for CSS Speech:" followed by the URL <https://tink.uk/why-we-need-css-speech/>

The video player interface includes a progress bar at 31:34 / 48:49, a video thumbnail of Léonie Watson at a podium, and a control bar with play, volume, and settings icons. Below the player, the video title "Designing voice interfaces | Léonie Watson | CSS Day 2023" is shown, along with the channel name "Web Conferences Amster..." (7.99K subscribers), a "Join" button, a "Subscribed" button with a dropdown arrow, and interaction buttons for "37" likes, "Share", "Download", and a menu icon.

Are you going to use the Web  
Speech API at work?

**Probably not.**



“Look at what inspires you”

- Tim Holman, FFConf 2018



2018.ffconf.org

What we did!

- 4 demo's
- Canvas, HTML5
- Enough research and dev for a lightning talk
- RequestAnimationFrame
- Cubic and Quadratic Beziers
- Line intersection math



38 / FFConf / @twholman

Tim Holman ★ Weird Web & Curious Creation

9:42 / 40:34

8. Weird Web & Curious Creation / Tim Holman / ffconf 2018

# What we did!

- One working demo!
- Experiment with a browser API: WebSpeechApi and HTMLMediaElement
- Lots of javascript
- Content for a talk
- CSS animations
- Read and understand API Specifications



You can learn by building  
“useless” things.

The image shows a mobile application interface with a dark green header bar. On the left side of the header, there are three navigation icons: a left-pointing arrow, a right-pointing arrow, and a clock icon. To the right of these icons is a search bar with a magnifying glass icon and the text "Search: rasmus". Below the header bar is a dark grey bar containing five menu items: "Messages 162", "Files 8", "Canvases 0", "Channels 0", and "People 0". The "Messages 162" item is highlighted with a thin orange underline.

← → ⌚

🔍 Search: rasmus

Messages 162   Files 8   Canvases 0   Channels 0   People 0

**alright let's do this**

**Start**

**Stop**

**hello everyone i'm so happy to be here**

**truly feels like the **first day of my life****

**today is about exploring the potential of the web  
speech api in karaoke**

**hello my name is anna kendrick**

**front-end developer at factor you can find them in  
websites where i also have a cancer via my personal  
website**

**spend as much time as possible turning to my blog**

**i also participated in the indian community and i've**

# Thank you!



THE RASMUS AND I 💖

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MY RASMUS PLAYLIST

