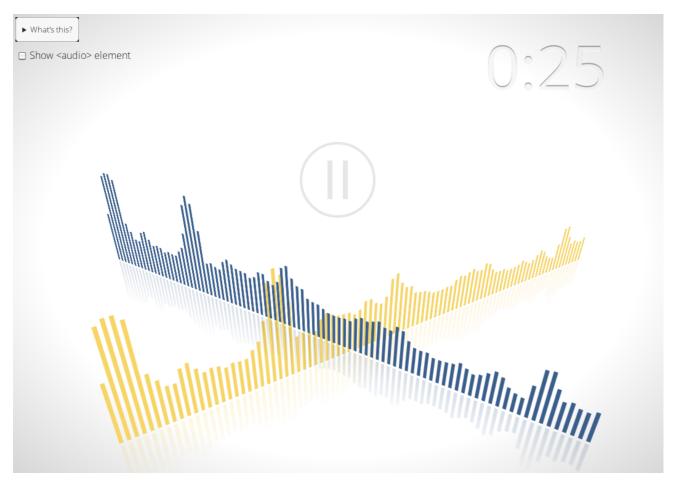
HTML5 audio and the Web Audio API are BFFs!



By <u>Eric Bidelman</u> Engineer @ Google working on web tooling: Headless Chrome, Puppeteer, Lighthouse



DEMO

As part of the <u>MediaStream Integration</u> with WebRTC, the Web Audio API recently landed an undercover gem known as createMediaElementSource(). Basically, it allows you to hook up an HTML5 audio element as the input source to the API. In layman's terms...you can visualize HTML5 audio, do realtime sound mutations, filtering, etc!

Normally, the Web Audio API works by loading a song via <u>XHR2</u>, file input, whatever,....and you're off. Instead, this hook allows you to combine HTML5 <audio> with the visualization, filter, and processing power of the Web Audio API.

Integrating with<audio> is ideal for streaming fairly long audio assets. Say your file is 2 hours long. You don't want to decode that entire thing! It's also interesting if you want to

build a high-level media player API (and UI) for play/pause/seek, but wish to apply some additional processing/analysis.

Here's what it looks like:

```
// Create an <audio> element dynamically.
var audio = new Audio();
audio.src = 'myfile.mp3';
audio.controls = true;
audio.autoplay = true;
document.body.appendChild(audio);
var context = new webkitAudioContext();
var analyser = context.createAnalyser();
// Wait for window.onload to fire. See crbug.com/112368
window.addEventListener('load', function(e) {
  // Our <audio> element will be the audio source.
  var source = context.createMediaElementSource(audio);
  source.connect(analyser);
  analyser.connect(context.destination);
  // ...call requestAnimationFrame() and render the analyser's output to canvas.
}, false);
```

As noted in the code, there's <u>a bug</u> that requires the source setup to happen after window.onload.

The next logical step is to fix <u>crbub.com/112367</u>. Once that puppy is ready, you'll be able to wire up WebRTC (the navigator.getUserMedia() API in particular) to pipe audio input (e.g mic, mixer, guitar) to an <audio> tag, then visualize it using the Web Audio API. Mega boom!

Except as otherwise noted, the content of this page is licensed under the <u>Creative Commons Attribution 3.0</u>
<u>License</u>, and code samples are licensed under the <u>Apache 2.0 License</u>. For details, see our <u>Site Policies</u>. Java is a registered trademark of Oracle and/or its affiliates.

Last updated July 2, 2018.