Web Speech API

André Natal
Mobile Voice Conference
August 2012

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SURE!
**But, what is Firefox OS?**

Firefox OS is the new mobile operating system developed by Mozilla, based on Linux and Firefox's powerful Gecko rendering engine.
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For Web developers, the most important part to understand is that the entire user interface is a web app capable of displaying and launching other Web apps.

Any modifications you make to the user interface and any applications you create to run on Firefox OS are web apps created using HTML, CSS, and JavaScript, albeit with enhanced access to the mobile device's hardware and services.
But, what is Firefox OS?

From a product perspective, Firefox OS is Mozilla's branding and support services applied on top of Boot to Gecko (B2G), which is the operating system's engineering codename.

Boot to Gecko is developed by a team of engineers inside Mozilla plus many external contributors from the wider Mozilla/open source community.
But, what is Firefox OS?
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SpeechRTC
Capturing voice encoded in Opus using HTML5 getUserMedia API and streaming via websockets or RTCDataChannel to a nodejs server powered with pocketsphinx.
```
var speechrtc = new SpeechRTC("en-US");
speechrtc.gram(['Apple','Oranges','Watermelon']);
speechrtc.listen();
SpeechRTC.onRecognition = function(said){
  console.log( "You said " + said );
}
```

https://github.com/andrenatal/speechrtc
We need an offline solution.
Ported pocketsphinx to javascript using emscripten and modified SpeechRTC to instead stream to an online server, call pocketsphinx javascript libraries.

https://github.com/syl22-00/pocketsphinx.js
It works, but it's too slow on low end devices
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We need a decoder embedded at Gecko.
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We need Web Speech API!
Developed integration of Pocketsphinx inside Gecko's Web Speech API Javascript layer as part of GSoC 2014 program.
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In April 2015 Mozilla started to build its first official speech group.
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Firefox Desktop

Firefox OS

Firefox for Android
Why Pocketsphinx

Reliable, accurate and lightweight

Code fully portable

Small footprint

Active community

Every Mozilla improvement will be contributed back
What's next?

Meet Vaani
What's next?

Meet Vaani

And her Chinese cousin
What's next?

Vaani

Estimated Release Summer 2015
Many voices one Mozilla!

Doing good is part of our code!

Thank you!

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