LET'S TALK!

JAVASCRIPT ENABLED VOICE COMMANDS

MY FIRST TIME AS A SPEAKER

FRONTEND TOOLING: PERFORMANCE & PRODUCTIVITY

27-02-2015 @ COMPETA MEETUP

I HAD 45 MINUTES

I TALKED AROUND 75 MINUTES

BEFORE WE START!

SO GIVE YOUR FEEDBACK ABOUT THIS TALK VIA

@FRONTENDMR ON TWITTER 🙏

INTRODUCTION

I'M

RAY, BORN IN 1988

A FRONTEND DEVELOPER FROM 2010

ADVOCATE OF LEARNING VANILLA JAVASCRIPT & PLAIN CSS

FOUNDER OF

<> Mr.Frontend

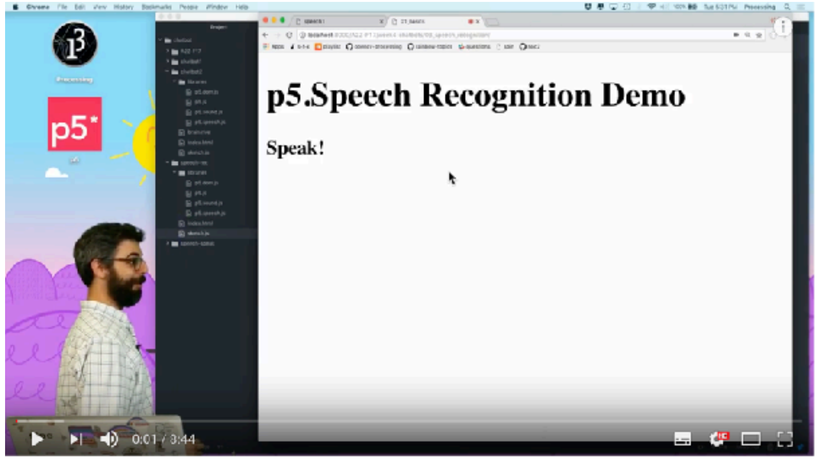
1. INTRODUCTION

2. THE STATE OF VOICE

3. THE WEB SPEECH API

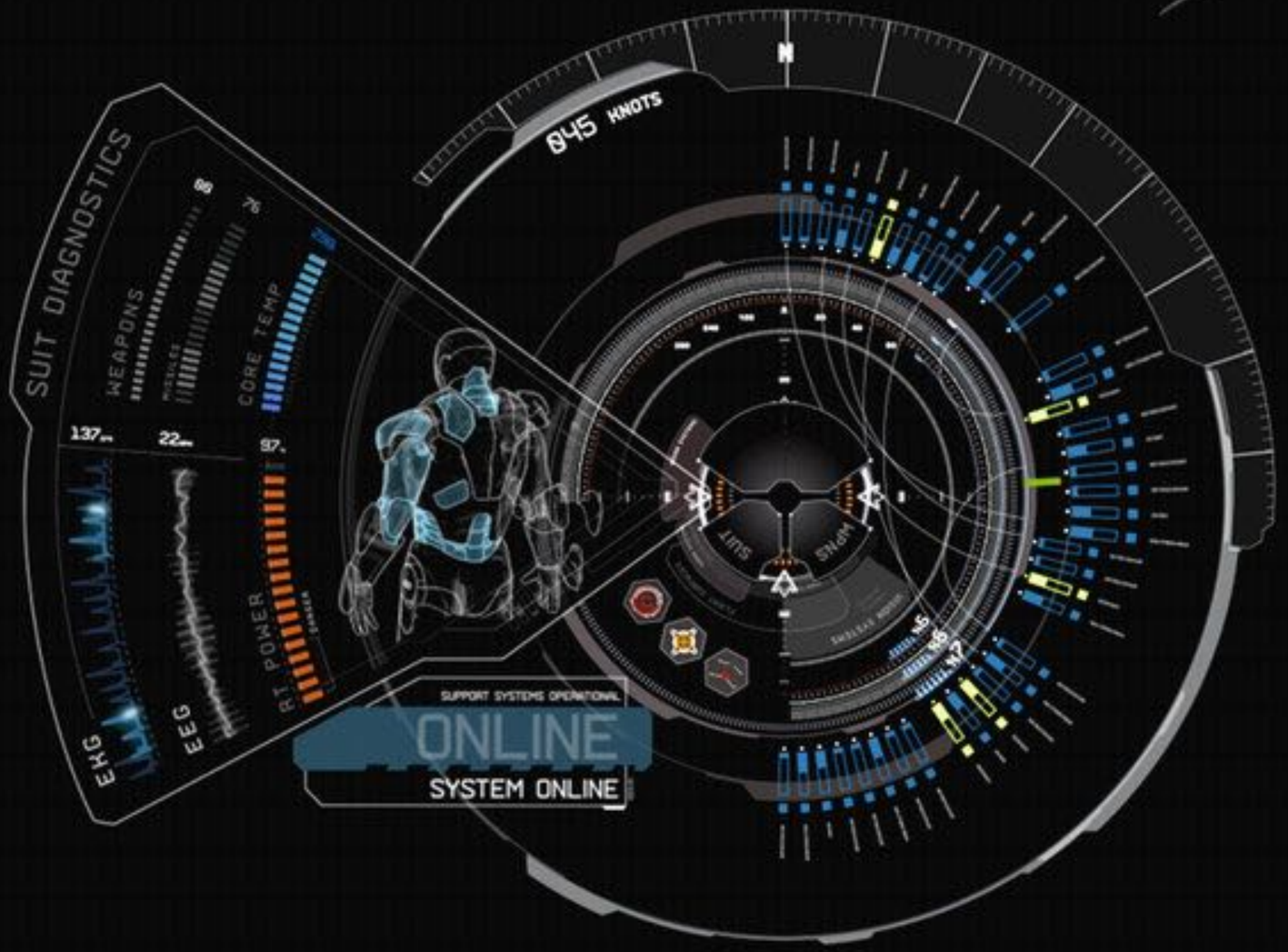
4. HOW CAN WE USE IT TODAY?

10.3: Text-to-Speech with p5.Speech - Programming with Text



10.4: Speech Recognition with p5.Speech - Programming with Text

STARK INDUSTRIES



WEIGHT ANALYSIS
Max. weight limit
900lbs.
Projected load
2340lbs.

THE STATE OF VOICE CONTROL

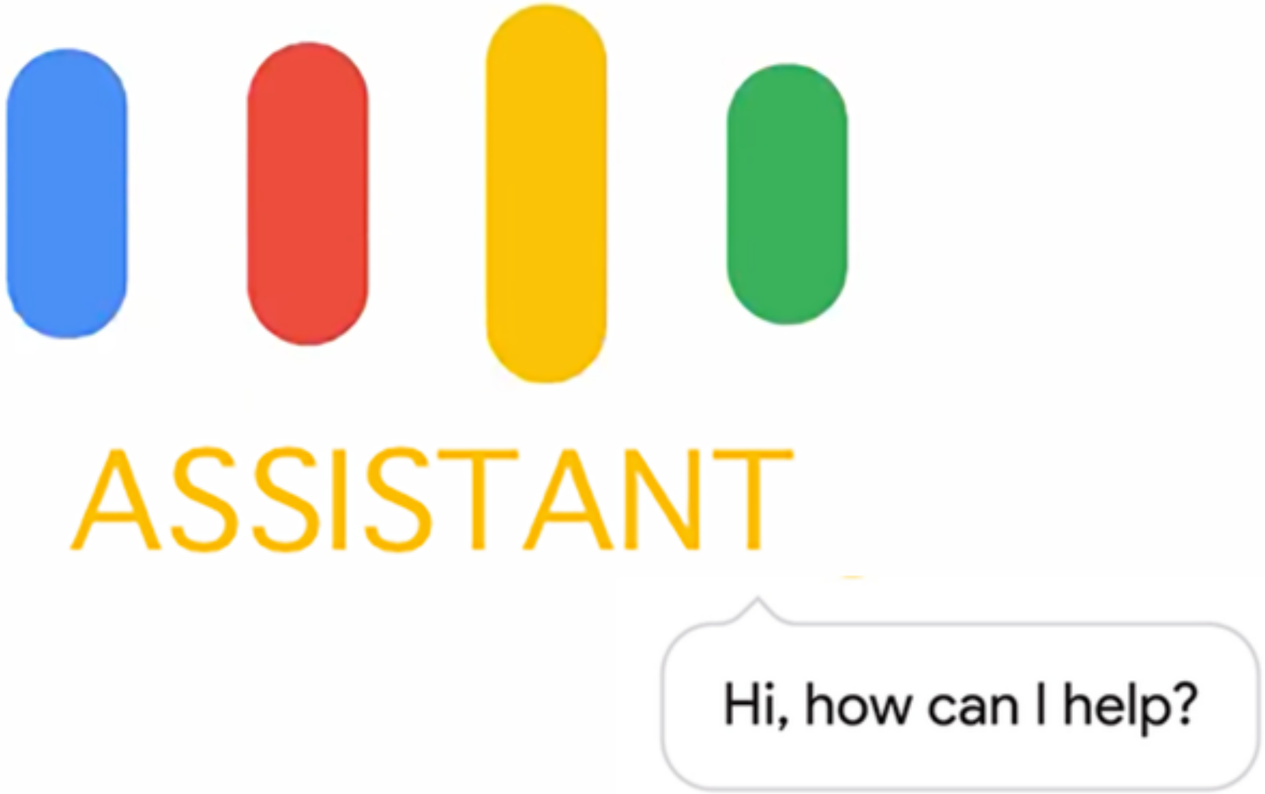
LAST YEARS

WAS ALL ABOUT VOICE!

APPLE SIRI
2011

MICROSOFT CORTANA

GOOGLE NOW
2015



GOOGLE HOME
2016

APPLE HOMEPOD
2016

APPLE HOMEPOD
2017

JAVASCRIPT
VOICE IN THE BROWSERS

VOICE IN THE BROWSERS

SINCE 2014

VOICE IN THE BROWSERS

> 50% U.S. TEENS
41% OF U.S. ADULTS

USE VOICE SEARCH ON A DAILY BASIS,
THIS IS GROWING EVERY DAY!

SOURCE: HTTPS://WWW.FORBES.COM/SITES/FORBESAGENCYCOUNCIL/2017/01/03/2017-WILL-BE-THE-YEAR-OF-VOICE-SEARCH/#1E212BAF12C5

THE WEB SPEECH API HAS TWO PARTS

SPEECHRECOGNITION

SPEECHSYNTHESIS

SPEECHRECOGNITION

```
var myRecognition = new SpeechRecognition() || new webkitSpeechRecognition();

var myGrammarList = new SpeechGrammarList() || new webkitSpeechGrammarList();
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHRECOGNITION

WARNING!!!!!

VERY POOR SUPPORT!!!

☹️☹️☹️☹️☹️☹️☹️☹️☹️☹️☹️

ONLY CHROME, OPERA & CHROME ON ANDROID

SPEECHRECOGNITION

GRAMMARLIST INTERFACE

SPEECHRECOGNITION

HOW TO PUT A GRAMMARLIST INTO THE SPEECHRECOGNITION

```
var grammarArray = [‘blue', ‘orange’];
var grammar = myGrammarList.addFromString(grammarArray, 1);
myRecognition.grammars = grammar;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHGRAMMARLIST/SPEECHGRAMMARLIST

SPEECHRECOGNITION

SPEECHRECOGNITION INTERFACE

SPEECHRECOGNITION

SPEECHRECOGNITION INTERFACE PROPERTIES

```
myRecognition.lang = ‘en-US’;
myRecognition.continuous = false;
myRecognition.interimResults = false;
myRecognition.maxAlternatives = 1;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHRECOGNITION

SPEECHRECOGNITION

SPEECHRECOGNITION INTERFACE METHODS

```
myRecognition.start();
myRecognition.stop();
myRecognition.abort();
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHRECOGNITION

SPEECHRECOGNITION

SPEECHRECOGNITION INTERFACE EVENTS

```
myRecognition.onspeechstart;
myRecognition.onspeechend;
myRecognition.onstart;
myRecognition.onend;
myRecognition.onresult;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHRECOGNITION

SPEECHRECOGNITION DEMO!

HTTP://BIT.LY/JS-SPEECH-DEMO

VANILLA JS SPEECH MODULE

HTTP://BIT.LY/JS-SPEECH-MODULE

SPEECHSYNTHESIS

SPEECHSYNTHESIS COMPONENT

YEAH!!!!!

VERY WELL SUPPORTED!!

😃😃😃😃😃😃😃😃😃😃😃😃

EVERYTHING BUT IE, OPERA MINI & ANDROID BROWSER

SPEECHSYNTHESIS

```
var mySynth = window.speechSynthesis;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHSYNTHESIS

SPEECHSYNTHESIS

SPEECHSYNTHESIS PROPERTIES

```
mySynth.paused = true/false;
mySynth.pending = true/false;
mySynth.speaking = true/false;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHSYNTHESIS

SPEECHSYNTHESIS

SPEECHSYNTHESIS METHODS

```
mySynth.speak();
mySynth.cancel();
mySynth.pause();
mySynth.resume();
mySynth.getVoices();
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHSYNTHESIS

SPEECHSYNTHESIS

SPEECHSYNTHESIS EVENTS

```
myRecognition.onvoiceschanged;
```

SOURCE: HTTPS://DEVELOPER.MOZILLA.ORG/EN-US/DOCS/WEB/API/SPEECHSYNTHESIS

SPEECHRECOGNITION DEMO!

HTTP://BIT.LY/JS-SYNTH-DEMO

HOW CAN WE USE IT?

HTTP://BIT.LY/WEB-SPEECH-DEMO

HOW CAN WE USE IT?

1. accessibility tool
2. transcribe speech, talks, podcasts, video’s

THANKS FOR LISTENING!!