

# Web Accessibility Testing Using CasperJS

by Curtis Jensen

slides and files: <https://github.com/curtjen/Web-Accessibility-Testing-Using-CasperJS>

# About Me

twitter: @curtjen

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Husband, father, Dvorak user, Digital Media grad (UVU),  
can solve the Rubiks cube (one handed), long walks on the  
beach (don't like the ocean, actually), Hobbyist board/card  
game designer, creator of things and destroyer of things

# What is Accessibility?

“Accessibility refers to the design of products, devices, services, or environments for people with disabilities.”

source: <http://en.wikipedia.org/wiki/Accessibility>

**Let's Play a Game!**



# Game Follow-up

How difficult was it to understand the story?

# Types of Disabilities

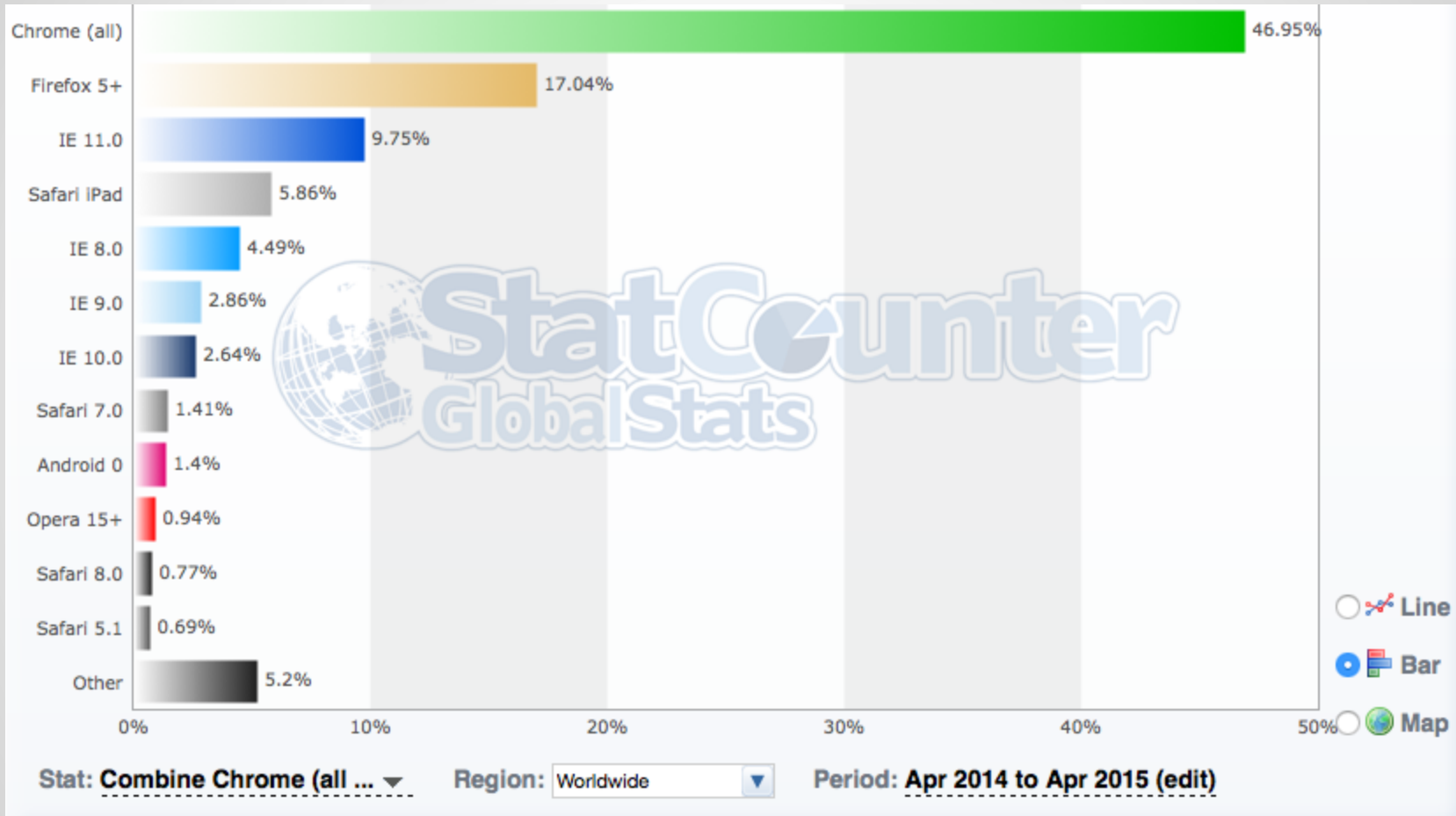
Most Disabilities Fit in These Categories:

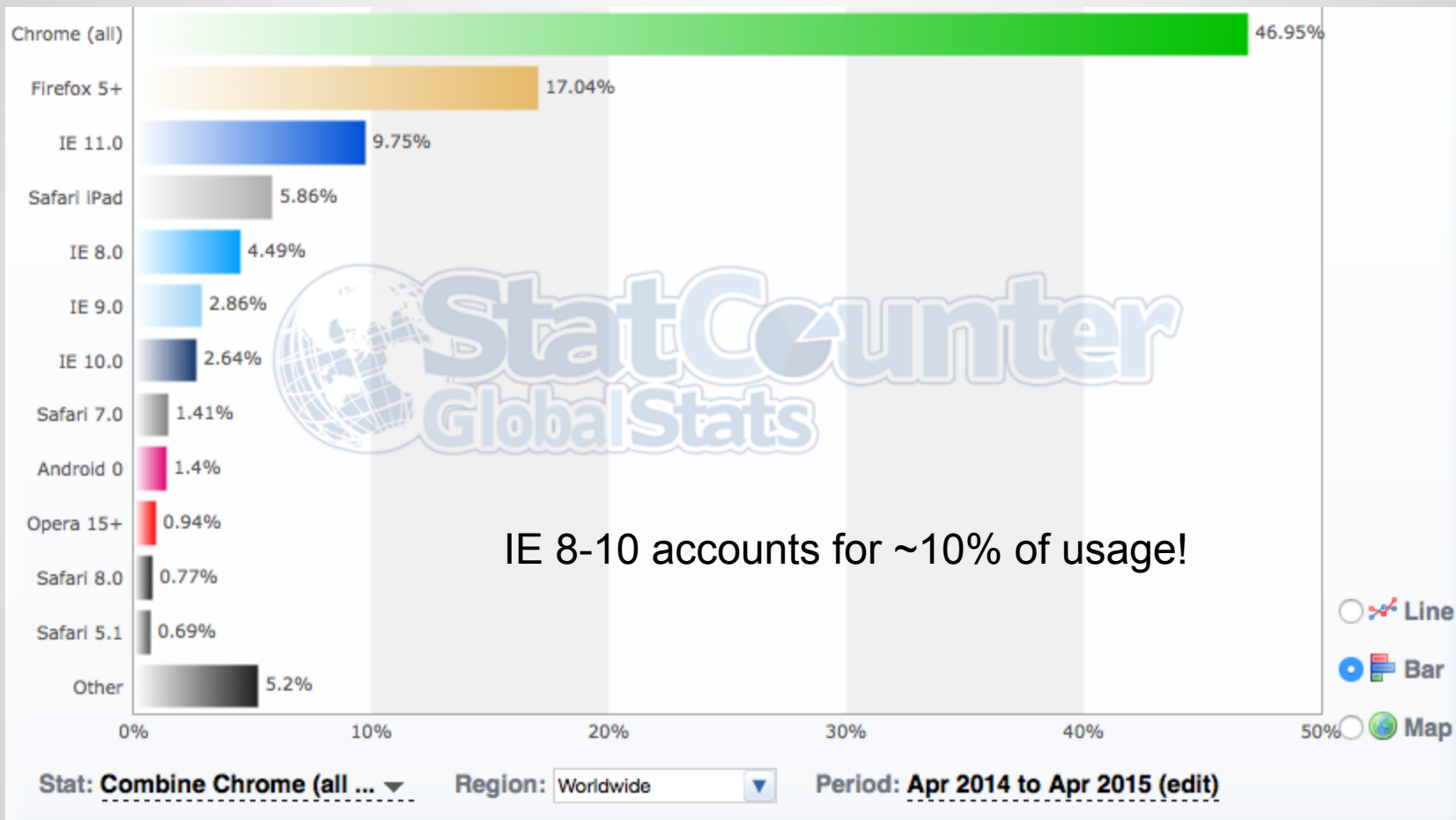
- Visual
- Hearing
- Cognitive
- Motor

**Now apply this to  
your web application  
or website**



# **Some Numbers**





# How About Disabled Users?

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“Though estimates vary, most studies find that about one fifth (20%) of the population has some kind of disability.”

source: <http://webaim.org/intro/#people>

# **There are Laws!**

If you live in the United States, applicable laws include:

- The Americans with Disabilities Act (ADA)
- The Rehabilitation Act of 1973 (Sections 504 and Section 508).

# **There are Laws!**

## **Web Content Accessibility Guidelines (WCAG)**

**Accessibility is Hard!**



# **... but all is not lost**

- Make a plan
- and start small

# Implementing Web Accessibility

- Awareness
- Leadership
- Policies and Procedures

**Solution to Make Things  
Less Painful...**

# **Automate the Things!**

## DISCLAIMER:

Even though there are tools available for automating accessibility testing, they cannot test everything; some manual testing is still needed.

# A Few Different Solutions:

- CasperJS with custom modules
- SpookyJS (CasperJS through Node JS)

# What is CasperJS?

“CasperJS is an open source navigation scripting & testing utility written in Javascript for the PhantomJS WebKit headless browser and SlimerJS (Gecko).”

source: <http://casperjs.org/>

# Cool Stuff CasperJS can do:

- defining & ordering browsing navigation steps
- filling & submitting forms
- clicking & following links
- capturing screenshots of a page (or part of it)
- testing remote DOM
- logging events
- downloading resources, including binary ones
- writing functional test suites, saving results as JUnit XML
- scraping Web contents

# Cool Accessibility Testing Tools

- Pa11y: <http://pa11y.org/>
- a11y: <http://addyosmani.github.io/a11y/>
- WAVE: <http://wave.webaim.org/>
- HTML\_CodeSniffer: [http://squizlabs.github.io/HTML\\_CodeSniffer/](http://squizlabs.github.io/HTML_CodeSniffer/)



# Problem

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They don't work with CasperJS out of the box  
(CasperJS does not like sharing its instances).

# **Solution 1**

CasperJS Custom Modules

**See Some Code**

# Solution 2

## SpookyJS

- CasperJS run through Node JS
- Share data between instances

**See Some More Code**

**No Perfect Solution**

# Where to Go From Here

- Become aware (Awareness, Leadership, Policy and Procedure)
- Get started
- Get involved:
  - <http://casperjs.org/>
  - <http://pa11y.org/>
  - <http://addyosmani.github.io/a11y/>
  - <https://github.com/SpookyJS/SpookyJS/>



# Thank You!

Reach out if you have any questions:

- twitter: @curtjen
- email: jensen.acurtis at gmail.com

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