# Internet Health

A Healthy Internet allows the web to meet its full potential
Openness and consistency has led to the web's success.

**Open**
**Safe**
**Decentralized**
**Inclusive**

# Open

Open Source
Respectful Attribution
Collaborative
Open to all

# Safe

Encryption
Require Strong Passwords
Only ask for data needed “lean data”
Foster trust with the end user

# Decentralized

Net Neutrality
Competition and choice
Interoperability
**Web Standards**

**The correct use of HTML is governed by**

# Web Standards

**These are specifications and guidelines which keep web applications...**

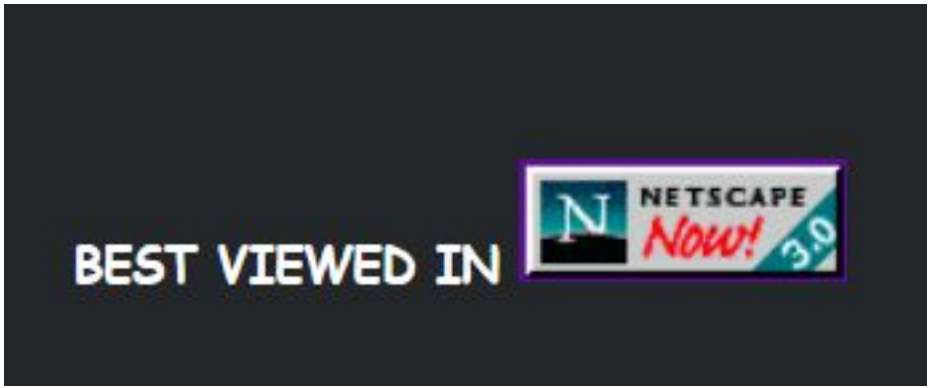
**Consistent**
**Accessible**
**Interoperable**

In the beginning, the web lacked standards.

This opened the floor for browsers to compete heavily with one another.

Which led to **exclusionary practices.** Websites became expensive to create and maintain let alone update to keep current.

Sometimes referred to as the
**Browser Wars**



HTML elements were created and supported differently browser to browser which **LIMITED** the power of the internet.

- Websites took much longer to create (multiple versions of the same site)
- Some websites could only be viewed properly in one browser (which you had to pay for in some way)
- Only select devices could run the right technologies to render web pages.

# Web Standards

**Multiple specifications which govern the use of web technologies.**
**Ways of designing web applications.**

- Standards are living documents
- Solutions to existing and future issues which come out of working groups
- There are specifications for accessibility, interoperability
- There are specifications which govern the use of HTML and CSS
- It’s up to **browser companies** to work these into their technologies
- It’s also up to the **developers** to create standards compliant products and contribute.

**Tim Berners-Lee** is credited as the inventor of the modern due in part to the creation of the first web browser. The first web browser could interpret web documents and display for easy interfacing.

This invention came out of an amalgamation of existing network technologies. Standardization of this technology led to the widespread adoption of the internet.

**One of many players in the formation and continuation of a web standards community**

Multiple groups are involved in this process.

Some maintain and add to specific standards like
**Web Accessibility**

The process of adding to the standards is discussion based and depends on many different groups.

**SDO's - Standards Development Organizations**

**IETF -** *TCP/IP, DNS*
**W3C**
**WhatWG**

# **World Wide Web Consortium** [W3C]

Working group essential to the concept and structure of the Web.

Founded by Tim Berners-Lee in October of 1994.

Purpose: Developing Protocols and guidelines that ensure long-term growth for the web.

Maintains the WCAG - Web Content Accessibility Guidelines

**https://www.w3.org/**

# WhatWG

**Web Hypertext Application Technology Working Group**

Founded in the early 2000's by a W3C splinter group.

The W3C created the HTML standard for HTML 4.0 and the WHATWG took it further to HTML5 which is what we use on modern websites.

Maintains Living Standard

**https://whatwg.org/**

# Inclusive

**Web Accessibility** is key

Guidelines and best practices…

**Keyboard**

**Mouse**

**Screen**

**Voice-to-text**

**Digital Assistant**

**Buttons**

**Trackpad**

**Sliders**

**Dials**

**Switches**

**Menus**

***Input Controls and Navigational Components***

# Web Accessibility

When we use computers (and the internet!), we're humans interacting with machines. This is why we need technology that allows us to interface with computer systems.

This is exactly how the internet became a household name! Before the modern web browser and it's point-and-click functionality, only those who knew the commands could interface (and even then, they still relied on a keyboard and screens).

**Web Accessibility is the practice of enabling this interaction for web pages for all people regardless of barriers.**

# Assistive Devices

Some general examples (long-term and temporary): Wheelchairs, canes, crutches, hearing aids, closed-captioning.

**Environmental modifications:** bars, ramps, widened doorways, elevators.

## Computer assistive technology

Screen readers
Screen magnification software
Speech input software
Head or eye tracking

# Web Accessibility Standards

Enabling assistive technology to convey meaning which might be lost if a page is **not viewed visually** or allowing easy navigation of a web site using something other than touch or a pointer is only one part of web accessibility as a whole.

**Much of this we accomplish by building well-structured, modern and valid HTML.**

# HTML describes the structure of a web page

**Web Content Accessibility Guidelines [ WCAG ]**
https://www.w3.org/WAI/standards-guidelines/wcag/

W3C Specification which acts as a resource for ensuring web pages and associated media are accessible to as many users as possible.

There are three levels of accessibility
A
AA
**AAA (most accessible of the 3, more effort to achieve)**

https://www.ontario.ca/page/how-make-websites-accessible