

Web Accessibility: A Missing Quality Requirement

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- Understanding Web Accessibility
 - What is Web Accessibility
 - The Growing Need
 - Accessibility Lawsuits
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- Assistive Technologies Demonstration
 - Compliant and Non-Compliant Websites
- QA's Role is Web Accessibility
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 - Accessibility Testing

- Serving Midwest since 1973 with offices in Chicago, Milwaukee, and Indiana
- Technology solutions and in-demand talent to Fortune 1000 and mid-market companies
- \$30M revenue with over 200 consultants
- Illinois Technology Association 2011 CityLIGHTS Award Finalist
- Commitment to qualified candidates with disabilities in technology roles through nAblement channel
- TAP Group Testing Center of Excellence includes web accessibility testing expertise

SPR Family of Companies



nAblement

socialsyntax

IMPACTinsights
Part of SPR Companies

Quality Management and Software Testing Practice



- Manual Functional Testing
- Test Automation
- **Web Accessibility Testing**
- Mobile Testing
- Onsite Testing
- Offsite Nearshore Testing

Understanding Web Accessibility

According to the World Wide Web Consortium (W3C)

Web accessibility means “that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging.”

- World-wide there are 124 million people with low vision and 37 million people legally blind
- In the U.S. 25.2 million adults report problems seeing (even with glasses or contacts) or are blind based on a survey of the U.S. National Center of Health Statistics
- Low vision affects approximately 1 in 28 Americans older than 40 years according to the Eye Disease Prevalence Research Group.
- Diabetes is the leading cause of ***new cases of blindness*** among adults aged 20–74 years. 28.5 million children and adults in the U.S. have diabetes. 4.4% have advanced diabetic retinopathy that could lead to severe vision loss.

- Bruce Maguire brought a complaint against the Sydney Organizing Committee for the Olympic Games (SOCOG) over the inaccessibility of its website, OLYMPICS.COM. Awarded **\$20,000**.
- Ramada.com and Priceline.com vs. New York Attorney General Eliot Spitzer. Paid the State of New York **\$40,000 and \$37,500**, respectively
- National Federation of the Blind (NFB) v. Target class action on behalf of all blind Americans denied access to www.target.com. **\$6 million** settlement fund and **\$ 3.7 million** in attorney's fees and costs to the plaintiffs.

Americans with Disabilities Act (ADA) of 1990

Prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and governmental activities.

Section 508 of the Rehabilitation Act of 1973 (as amended in 1998)

Requires all Federal Electronic and Information Technology (E&IT) developed, maintained, procured, and used after June 21, 2001 to be accessible to all employees and members of the public with disabilities

Illinois Information Technology Accessibility Act (IITAA)

Requires Illinois agencies and universities to ensure that their web sites, information systems, and information technologies are accessible to people with disabilities

Electronic and Information Technology (E&IT) includes:

- Telecommunication devices
(*e.g., a telephones, cell phones, pagers*)
- Multimedia and Video products (*e.g., televisions, VCRs, DVD players, videotaped productions, including content on a CD or DVD or video cassette*)
- **Web sites (Internet and Intranet) including access to multimedia, documents, etc.**
- Services such as Information Documentation and Support
(*e.g. user guides, technical support*)
- Desktop or portable computer (*e.g., laptops, PCs, tablets*)
- Software or operating system
(*e.g., word processing application, accounting software, authoring and document presentation tools*)
- Electronic office products and equipment
(*e.g., photocopiers, calculators, fax machines, printers*)



W3C

World Wide Web Consortium –

An international community that develops standards to ensure the web reaches its full potential

WAI

Web Accessibility Initiative –

Strategies, guidelines, resources to make the Web accessible to people with disabilities

WCAG 2.0

Web Content Accessibility Guidelines-

Recommendations which explain to developers and authors how to make Web content accessible to people with disabilities

Section 508 is based on WCAG 2.0 but does not include all WCAG guidelines.

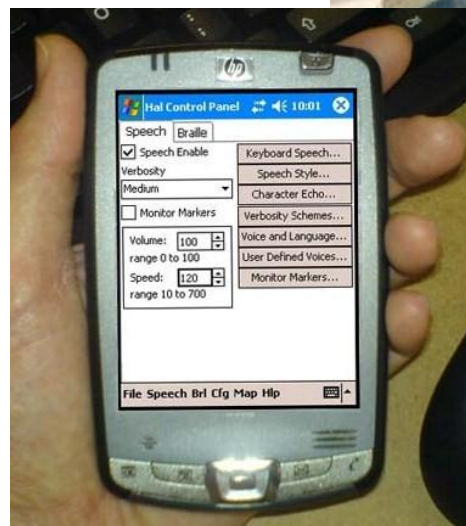
Goal: Perceivable, Operable, Understandable, and Robust

- a) Non-text elements
- b) Multi-media presentation
- c) Use of color
- d) Style sheets
- e) Server-side image map
- f) Client-side image map
- g) Simple data tables
- h) Complex data tables
- i) Frames titling
- j) Flicker
- k) Alternative compliance
- l) Scripts
- m) Applet and plug-ins
- n) On-line forms
- o) Skip navigation
- p) Timed alert response

- JAWS 12.0.525 for PC
- Window Eyes 7.5 for PC
- VoiceOver 3 for Mac

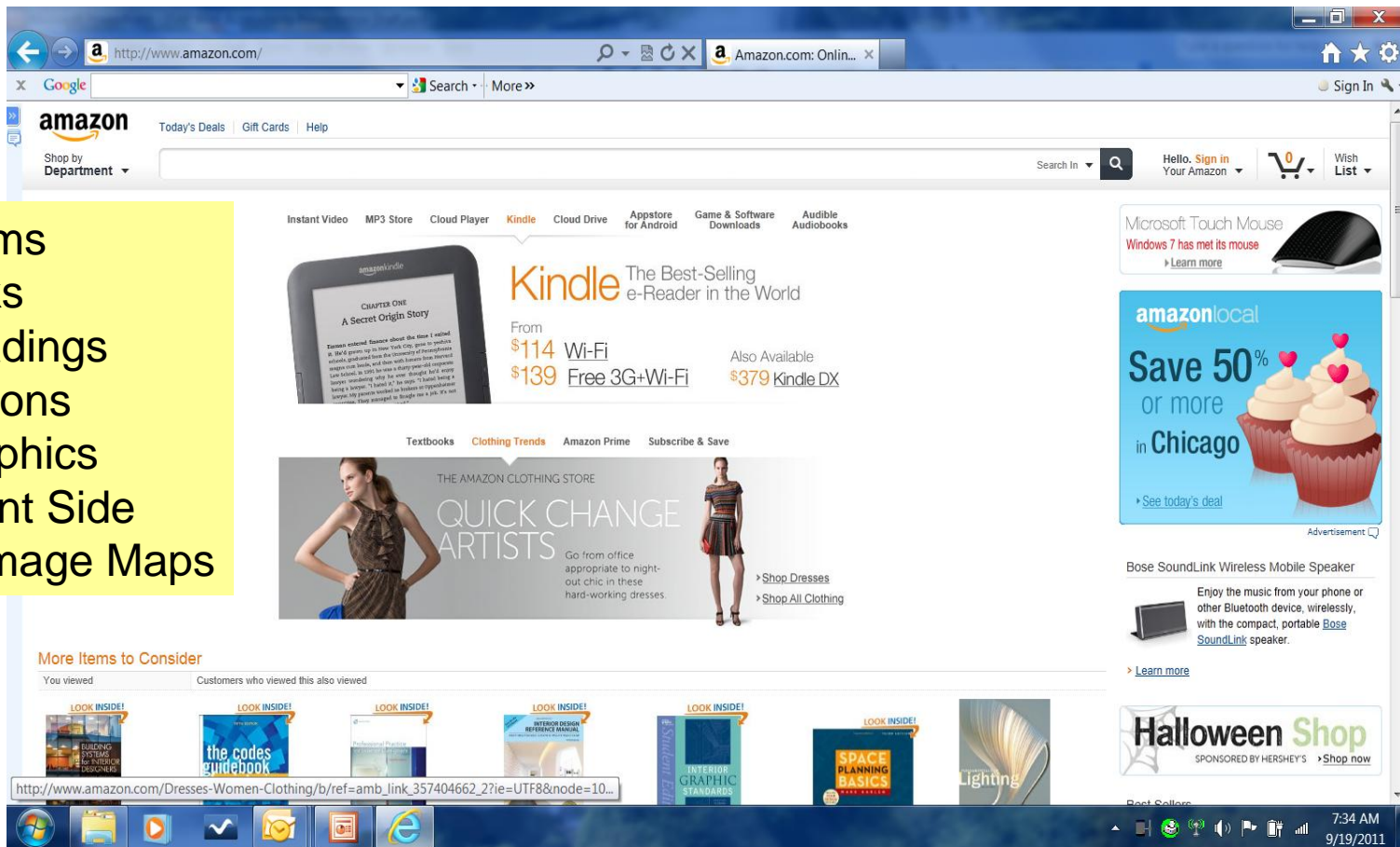
Demonstration

Accessible/Usable website
Non-compliant website



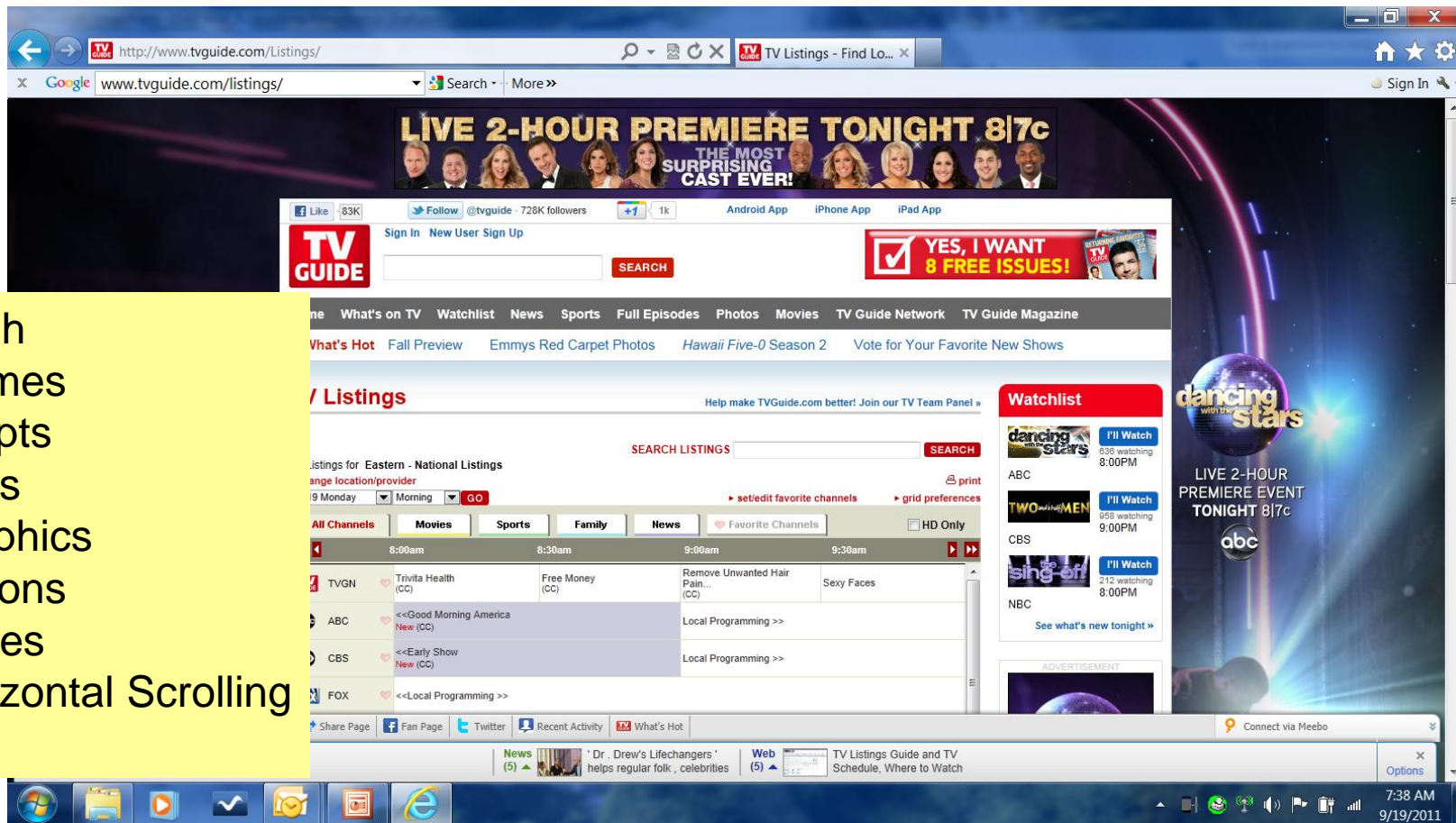
Good Accessibility and Usability www.amazon.com

Forms
Links
Headings
Buttons
Graphics
Client Side
Image Maps

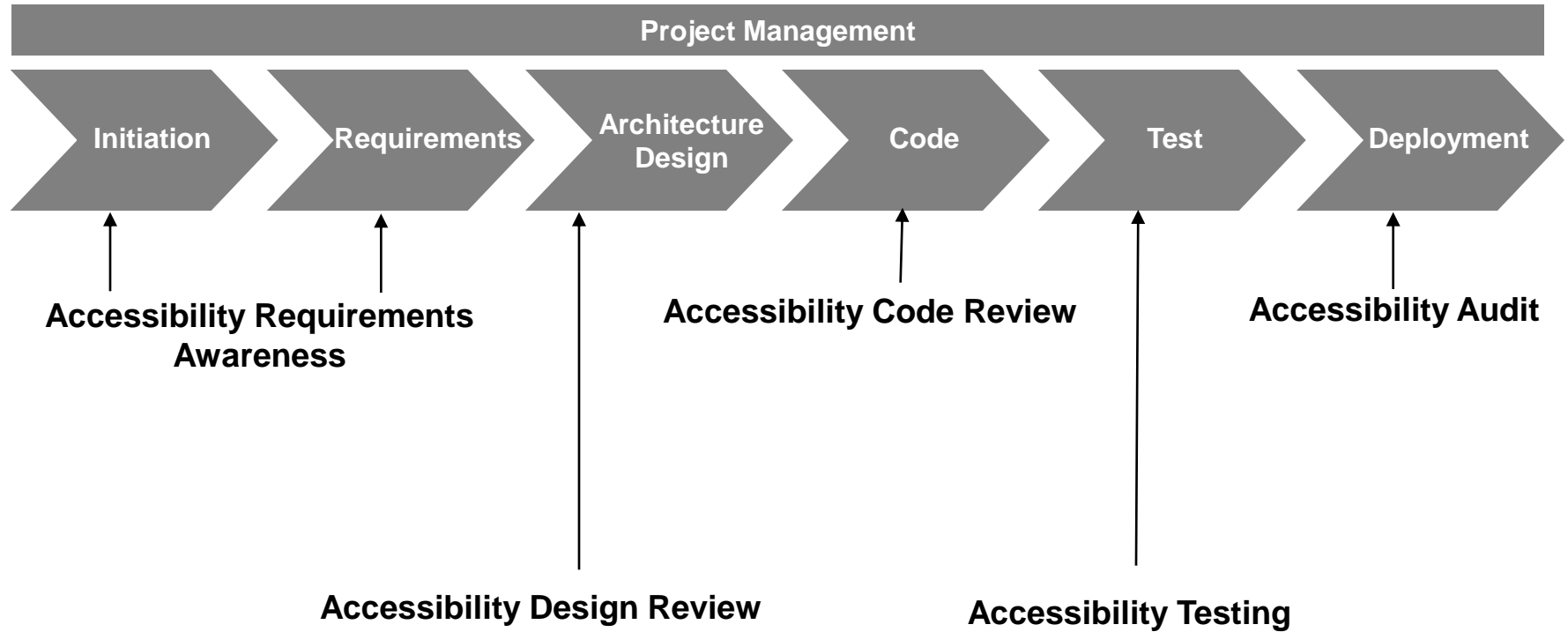


Challenges with Accessibility and Usability www.tvguide.com/listings/

- Flash
- Frames
- Scripts
- Links
- Graphics
- Buttons
- Tables
- Horizontal Scrolling



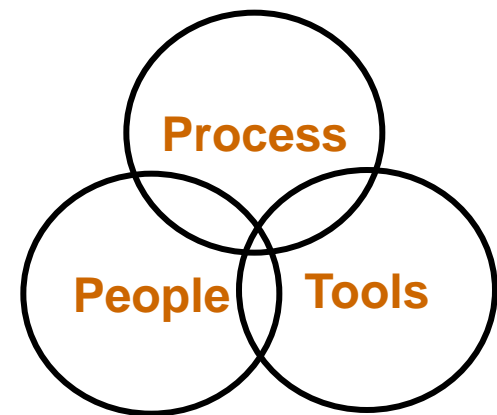
QA's Role in Achieving Web Accessibility



- Build **awareness** that accessibility is a quality attribute
- **Educate** project teams on web accessibility standards (business analysts, developers, project managers)
- Define web accessibility as a **requirement** in business requirements documents
- Conduct accessibility design reviews and code reviews for **early detection** of non-compliance

- Testing scope based on accessibility goal
 - Validating Section 508 compliance and/or usability?
 - Testing all web pages or sampling web pages?
 - What is the number of web pages, documents, forms?
 - How many platforms and browsers?
- Testing approach and resource options
 - Manual testing with screen readers
 - Automated tools (AChecker, FAE)
 - W3C HTML and CSS validators
- Reporting non-compliance
 - Report as defects
 - Prepare formal findings report (audit)
 - Provide usability rating

- Web accessibility is a legal and social responsibility
- Published laws and standards provide clear requirements for accessibility testing
- Enabling tools are available
- People who are passionate about accessibility make a difference – senior leaders and QA testers 😊



Web Accessibility Testing