

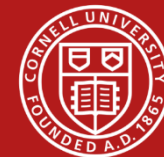
*K. Lisa Yang and Hock E. Tan*  
Institute on Employment and Disability



# **Web Accessibility and its Impact on eLearning**

Camille Lee, Mike Ward, & Jennifer Mimno

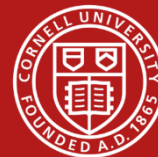
August 3, 2016



# The Law

The following laws apply to Cornell University:

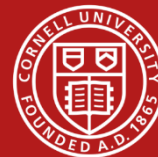
- The Americans with Disabilities Act (ADA)
  - **Title II** as a State University
  - **Title III** as a Private University
- The Rehabilitation Act of 1973
  - **Section 503** as a federal contractor
  - **Section 504** as receiving federal financial assistance
  - **Section 508** as adopted into Cornell policy



# National Association of the Deaf (NAD) v. Harvard University: A Cautionary Tale

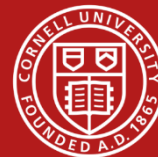
- February 2015: NAD filed a lawsuit against Harvard University, citing violations of Section 504 of the Rehab Act and Title III of the ADA for failure to provide equal access to online audio and audiovisual content for deaf and hard of hearing individuals

National Association of the Deaf et al. v. Harvard University and President and Fellows of Harvard College, *Civil Action No. 3:15-cv-30023-MGM (D. Mass.)*



# **National Association of the Deaf (NAD) v. Harvard University: A Cautionary Tale**

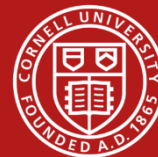
- May 2015: Harvard files a motion to dismiss the charges, arguing that (1) the Department of Justice has not yet issued web regulations on website accessibility under the ADA and (2) that neither the ADA nor Section 504 require the provision of captions on its online programming



# **National Association of the Deaf (NAD) v. Harvard University: A Cautionary Tale**

A Statement of Interest filed by the United States of America on the case against Harvard states that “Harvard is wrong on both counts”.

[https://www.ada.gov/briefs/harvard\\_soi.pdf](https://www.ada.gov/briefs/harvard_soi.pdf)



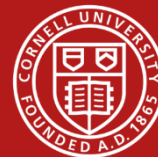
# **National Association of the Deaf (NAD) v. Harvard University: A Cautionary Tale**

- January 2016: A US Magistrate denies motion to dismiss the case

“Colleges and universities should be reviewing their websites to ensure that they are accessible to individuals with disabilities. The report and recommendation from the U.S. Magistrate demonstrates that the plaintiffs' claims are viable, that colleges and universities have obligations to caption their websites, and that a delay for DOJ to issue web access regulations will not serve as a defense.”

- Marc Charmatz, Esq

(<http://onlinelibrary.wiley.com/doi/10.1002/dhe.30174/full>)



# **National Association of the Deaf (NAD) v. Harvard University: A Cautionary Tale**

“Harvard and MIT systematically discriminate against people who are deaf and hard of hearing and perpetuate the isolation of people with disabilities that the ADA was meant to eliminate,” said Christine M. Griffin, Executive Director of the Disability Law Center in Boston, Massachusetts. **“Our hope is that this lawsuit will change not only Harvard’s and MIT’s practices, but set an example for other universities to follow. These lawsuits seek to reform conduct. They do not seek money damages.”**

**<https://nad.org/news/2015/2/nad-sues-harvard-and-mit-discrimination-public-online-content>**





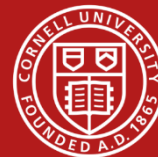
# WCAG 2.0

## Web Content Accessibility Guidelines

The World Wide Web Consortium (W3C) is the main international standards organization for the World Wide Web. The WCAG 2.0 is the second version of guidelines produced by the W3C's Web Accessibility Initiative (WAI).

### Resources

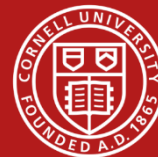
- W3C: <https://www.w3.org/TR/WCAG20/>
- WebAIM: <http://webaim.org/standards/wcag/checklist>



# WCAG 2.0

## Web Content Accessibility Guidelines

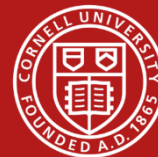
- **Perceivable**  
e.g., Captioning, alt text, not using color to signify meaning, etc.
- **Operable**  
e.g., Keyboard access through tabbing, skip to links to avoid scrolling, etc.
- **Understandable**  
e.g., Consistency in design and presentation, simple language, no unnecessary movement like flashing, etc.
- **Robust**  
e.g., Keeping up with technology changes, keeping in mind that users have different screen sizes, browsers, platforms, assistive technologies, etc.



## WCAG 2.0 Levels

Three Levels of Conforming to Guidelines:  
A, AA, AAA

- **A**: lowest level conformance
- **AA**: intermediate level conformance
- **AAA**: advanced or fully accessible conformance

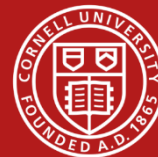


## **WCAG 2.0**

These are recommendations only, but they are most likely the basis on which Titles II and III of the ADA will be updated

### **Implications for higher education**

- Cornell has accessibility obligations under both the ADA and the Rehab Act

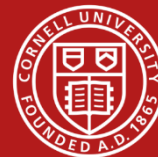


# WAI-ARIA Authoring Practices 1.1

Web coding standard for making web elements accessible.

## Resources

- W3C: <https://www.w3.org/TR/wai-aria-practices/>
- WAI: <https://www.w3.org/WAI/intro/aria>

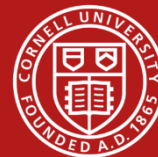


## Section 508

### Added in the 1998 amendment of the Rehabilitation Act of 1973

- Section 508 requires the electronic and information technology purchased by federal agencies to be accessible to people with disabilities. The regulations were created by the United States Access Board.
- In 2015, the Access Board proposed a rule to update the accessibility requirements of Section 508
- These proposed rules heavily reference **WCAG 2.0 AA** and will clear up many inconsistencies.

<https://www.section508.gov/sites/default/files/access-board-proposed-rule-2015-accessible-final.pdf>



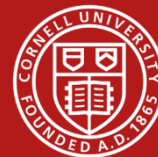
## Section 508 Resources

- Access Board: <https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards>  
(1194.22 Web-based intranet and internet information and applications)
- WebAIM: <http://webaim.org/standards/508/checklist>
- Section508.gov: <http://www.section508.gov/summary-section508-standards>
- Section508.gov proposed rules:  
<https://www.section508.gov/sites/default/files/access-board-proposed-rule-2015-accessible-final.pdf>



# Accessibility and eLearning

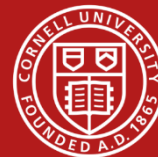




## Product accessibility reviews

Software companies which have addressed Section 508 will provide support statements or VPATS.

- WCAG 2.0 Support Statements
- Voluntary Product Accessibility Template (VPAT)



# Keeping the big picture in mind

- Create a culture of accessibility
- Include all staff in discussion regarding accessibility because it is not just a technical issue (administrative, executive, faculty, technical...)
- Test for usability and accessibility regularly by staff
- Formally test for accessibility via contractors (e.g., Paciello Group)
- Train staff (e.g., creating accessible PDFs, effectively using styles in Word)
- Make sure to allow for accommodation requests



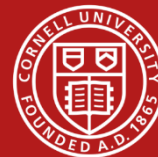
# Making video accessible

- **Live video**
  - Live captioning (e.g., Caption Colorado)
  - American Sign Language (ASL)
  - Live translation (e.g., Automatic Sync Technologies)
- **Archived video**
  - Captioning (open vs. closed)
  - Audio descriptions
  - Transcript
- **Accessible video players**



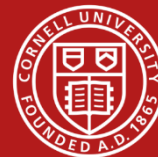
# Making audio accessible

- Provide transcripts



# Making documents accessible

- MS Word
  - Add alt text to images
  - Use styles (Heading 1, Heading 2, etc.)
- PDF
  - Scanned images are a problem
  - Touch up reading order
  - Add alt text
- PowerPoint
  - Turn into PDFs
  - Make sure PDFs are accessible
- Large print
- Braille



# Common web accessibility technology

Screen readers and screen magnifiers are the most common tools used by people who are blind or have low vision to navigate the web.

- JAWS (30.2%)
- ZoomText (22.2%)
- Window Eyes (20.7%)

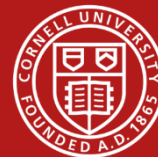
## **Market share report:**

<http://webaim.org/projects/screenreadersurvey6/#primary>



# Accessibility of webinar platforms

- Cisco Webex
- Adobe Connect
- Blackboard Collaborate
- Zoom



# Learning management systems (LMS)

- Blackboard
  - Blackboard Learn with the Original Experience WCAG 2.0 Level AA Support Statement May 2016
  - [https://en-us.help.blackboard.com/@api/deki/files/16757/Learn\\_9.1\\_WCAG\\_2.0\\_Level\\_AA\\_Support\\_Statementemement\\_\(May\\_2016\).pdf](https://en-us.help.blackboard.com/@api/deki/files/16757/Learn_9.1_WCAG_2.0_Level_AA_Support_Statementemement_(May_2016).pdf)
- Canvas
  - VPAT: <https://www.canvaslms.com/accessibility>
- Moodle
  - Accessibility statement: <https://docs.moodle.org/dev/Accessibility>





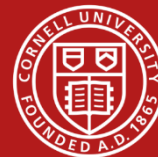
# SCORM

- Accessibility of authoring tool
- Flash / Flex accessibility



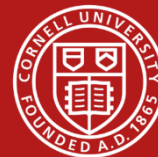
# Most common web accessibility errors

- Alt text
- Forms
- Tab access
- Color contrast
- Clear hierarchy of content
- Tables
- Accessibility of third-party assets and websites



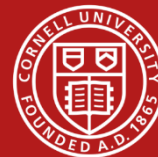
# Web accessibility testing

- Test site with **accessibility checker**: <http://wave.webaim.org/>
- Test with **screen reading software**
  - Test with JAWS
    - Demo version (40 free minutes)
  - Test with Window Eyes
    - Free with MS Office license
  - Major things to check
    - Tab order
    - Forms mode
    - Alt text
- **Watch a screen reader user** navigate a site



## Key questions

- What are the questions to ask when a feature is not accessible?
  - Can it be made accessible?
  - Is the feature necessary for the course?
  - Can an alternate process replace the experience?
  - How can people still participate?
- Why do I need to worry about accessibility?
  - Generally making material accessible makes the content more usable by all users (e.g., color contrast)
  - Legal obligations under ADA and Rehab Act
  - Video captioning; people like to watch without sound on purpose
  - Transcript is useful; back-up notes
  - Makes content more understandable by everyone



## Key questions (cont.)

- How do we handle accommodation requests?
  - Request for accommodations provided on registration forms.
  - Two days advance notice are needed before webinars to set up captioning
  - Accessible material must to prepared in advance
- Accessibility issues vs. screen reader's familiarity with technology
- Do our websites provide accessibility statements?
- How do I know something is accessible?
  - Testing



# Contact Information

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