

End-user usage of accessibility packages and templates

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Accessibility Statement: this PDF is WCAG2.1AA compliant.

Motivation

What can I do to support a “typical” American mathematician who wants to create accessible documents which meet legal requirements?

Here is an summary of my talk:

1. Context in the United States
2. Common issues
3. Possible solutions

USA rules: internal webpages

Section 504 states, in part: “No otherwise qualified individual with a disability in the United States ... shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance or under any program or activity conducted by any Executive agency...”

The **Americans with Disabilities Act of 1990 or ADA** is a civil rights law that prohibits discrimination based on disability. “Title II of the ADA requires state and local governments to make sure that their services, programs, and activities are accessible to people with disabilities.”

Title III of the ADA “prohibits discrimination on the basis of disability in the activities of places of public accommodation.”

USA rules: external webpages

“The **Rehabilitation Act of 1973** prohibits discrimination on the basis of disability in programs conducted by Federal agencies, in programs receiving Federal financial assistance, in Federal employment, and in the employment practices of Federal contractors.”

In 1998, Congress amended the Act to include **Section 508**, which states that “agencies must give disabled employees and members of the public access to information comparable to the access available to others.”

Since 2018, the U.S. Access Board has required WCAG2.0AA.

Legal cases

National Association of the Deaf v. Harvard and MIT

Department of Education's "Marcie Lipsitt Rule"

New DoJ rules

By April 2026 or 2027, all public colleges and universities must make all educational content WCAG 2.1AA compliant.

Additionally, the “technical and legal restrictions” clause should be used sparingly.

PDF/UA was discussed as a standard, but ultimately did not become a rule.

Implications

What does this mean for American mathematicians?

All online educational content, including textbooks, lecture notes, handouts, assignments, must be WCAG2.1AA compliant.

This may or may not include PDFs posted to arXiv!

List of Obstacles

- ▶ Unorthodox LaTeX Usage
- ▶ Lack of institutional support
- ▶ Perverse “Incentive Structure”
- ▶ Incorrect information

Obstacle 1: LaTeX Usage

In the United States, most mathematicians self-teach LaTeX.

Most instructors do not learn about accessibility.

Solution 1: LaTeX Usage

Standardized Webinars or Classes on LaTeX?

Make accessibility part of graduate studies?

Obstacle 2: Institutional Support

Most colleges and universities hire instructional designers or have a Disability Resources department. Usually they are not mathematicians.

Wealthier university administrators simply budget for lawsuits; less wealthy university administrators often cannot provide funding for accessibility.

Solution 2: Institutional Support

Threaten with lawsuits? Frame it as student success? Bad publicity??

Hire a mathematician to support accessibility?

Obstacle 3: Incentive Structure

Research faculty (with tenure) are often not incentivized to teach well.

Instructional faculty (without tenure) are often not provided with resources.

Solution 3: Incentive Structure

Funding for Accessibility?

Reward Accessibility Work?

Obstacle 4: Information

Several prominent accessibility organizations claim that PDFs created through LaTeX are never accessible.

As a result, it has been suggested that PDFs be banned.

Solution 4: Information

One of you (not me) should email them with examples.