
THE AMERICANS WITH DISABILITIES ACT IS OUTDATED

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ABSTRACT

This Article comprehensively examines the way that inaccessible decisions related to information technology, such as software, negatively impact many individuals with disabilities in employment and education. It argues that accessible information technology should be a required component of all new construction and alterations so that retrofitting is not required after the fact. The ADA needs to be updated to meet the requirements of the modern information age.

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I. INTRODUCTION

The enactment of the Americans with Disabilities Act (ADA) in 1990,¹ and its 2008 amendments,² were historic achievements for many individuals with disabilities. Today, we can take for granted that employers do not arbitrarily exclude people from employment because of a disability,³ institutions of higher education extend modifications or adjustments to students with disabilities,⁴ hotels and restaurants have entrances that can be navigated in wheelchairs,⁵ and residential streets have curb cuts.⁶ While litigation is sometimes necessary to enforce these rules, the experiences of many individuals with disabilities have improved dramatically since Congress enacted the ADA in 1990.⁷

No statute is perfect, however, and the ADA has been slow to catch up to the 21st century's emphasis on information technology.⁸ Neither the statutory nor regulatory language explicitly responds to the technological changes that impede access for many individuals with disabilities—especially those with visual or learning disabilities⁹—even though the preamble to the original 1991 ADA regulations aspires to meet this need.¹⁰ This Article will

1. Americans with Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 327 (codified as amended at 42 U.S.C. §§ 12101–12213 (2012)).

2. ADA Amendments Act of 2008, Pub. L. No. 110-325, 122 Stat. 3553 (codified as amended at §§ 12101–12213).

3. See 42 U.S.C. § 12112(a).

4. See *id.* § 12189.

5. See *id.* § 12182; see also *id.* § 12181(7)(A)–(B).

6. See 28 C.F.R. §§ 35.150(d)(2), .151(i) (2014).

7. See *The Americans with Disabilities Act of 1990*, EEOC.GOV, <http://www.eeoc.gov/eeoc/history/35th/1990s/ada.html> (last visited Apr. 8, 2015) (describing some of the settlements and litigation to enforce the ADA by the United States Equal Employment Opportunity Commission).

8. Debra Cassens Weiss, *Disability Law Lags Behind Technology*, *White House Official Says*, ABA J. (July 27, 2010), http://www.abajournal.com/news/article/ada_lags_behind_technology_white_house_official_says/.

9. See *id.*; see also Kristen Decarr, *Disabled Students Lacking Technology to Excel*, EDUCATIONNEWS.ORG (Sept. 9, 2014), <http://www.educationnews.org/technology/disabled-students-lacking-technology-to-excel/>.

10. See Nondiscrimination on the Basis of Disability; Accessibility of Web Information and Services of State and Local Government Entities and Public Accommodations, 75 Fed. Reg. 43,460, 43,463 (July 26, 2010) (to be codified at 28 C.F.R. pts. 35–36); see also Statement of Interest of the United States of America at 13 n.11, *New v. Lucky Brand Dungarees Stores, Inc.*, No. 14-CV-20574 (S.D. Fla. Apr. 10, 2014) (“The House Committee on Education and Labor stated that it intended ‘that the types

discuss that coverage gap.

The coverage gap affects individuals in the areas of employment, education, access to public services, and accommodations.¹¹ Some emerging case law is starting to close the gap,¹² and the Department of Justice (DOJ) has begun to recognize the importance of the problem.¹³ However, to

of accommodation and services provided to individuals with disabilities, under all of the titles of this bill, should keep pace with the rapidly changing technology of the times,' and that technological advances 'may require public accommodations to provide auxiliary aids and services in the future which today would not be required because they would be held to impose undue burdens on such entities.'" (quoting H.R. Rep. No. 101-485, pt. 2, at 108 (1990))).

11. See, e.g., Decarr, *supra* note 9; Joshua A. Stein, *As ADA Turns 25, Places of Public Accommodation Must Consider Accessible Technology*, INSIDE COUNSEL (Mar. 25, 2015), <http://www.insidecounsel.com/2015/03/25/as-ada-turns-25-places-of-public-accommodation-mus>.

12. See, e.g., *EEOC v. Ford Motor Co.*, 752 F.3d 634, 641 (6th Cir. 2014) ("[T]he law must respond to the advance of technology in the employment context, as it has in other areas of modern life, and recognize that the 'workplace' is anywhere that an employee can perform her job duties." (footnote omitted)); *Nat'l Fed'n of the Blind v. Target Corp.*, 452 F. Supp. 2d 946, 956 (N.D. Cal. 2006) (denying a motion to dismiss a claim that defendant's "website [was] not accessible to the blind" because "the inaccessibility . . . impede[d] the full and equal enjoyment of goods and services offered").

13. See, e.g., Statement of Interest of the United States of America, *supra* note 10, at 7-8 ("[T]he absence of specific technical standards or regulatory provisions that directly address a public accommodation's obligation to provide accessible [point-of-sale] devices in no way establishes that the accessibility of [such] devices is outside the scope of Title III. [The DOJ] has long considered websites to be covered by Title III despite the fact that there are no specific technical requirements for websites currently in the regulation or ADA Standards." (citing Statement of Interest of the United States, *Nat'l Assoc. of the Deaf v. Netflix, Inc.*, 869 F. Supp. 2d 196 (D. Mass. 2012))); *Accessibility of State and Local Government Websites to People with Disabilities*, U.S. Dep't of Justice, <http://www.usdoj.gov/crt/ada/websites2.htm>, (last updated Oct. 9, 2008) (discussing the importance of accessibility of Governmental websites under the ADA); Consent Decree at 4-5, *Nat'l Fed'n of the Blind v. HRB Digital LLC* (2014) (No. 1:13-cv-10799-GAO), 2014 WL 4999221 [hereinafter Consent Decree] (requiring H&R Block to make its website, mobile application, and online tax preparation product accessible to individuals with disabilities); Settlement Agreement at ¶ 13(a), *United States v. La. Tech. Univ.*, (DJ No. 204-33-116), available at <http://www.ada.gov/louisiana-tech.htm> (requiring Louisiana Tech University to revise its policies to ensure that the university will deploy only technology and course content that is accessible to individuals with disabilities). The Department of Justice has also filed a motion to intervene in *Dudley v. Miami University*, a case involving a student with a visual impairment. See Complaint in Intervention at ¶ 1, *Dudley v. Miami University*, No. 1:14-cv-038 (S.D. Ohio, 2015) [hereinafter *Dudley Intervention*], available at <http://www.justice.gov/file/miami-u>

understand the urgency of meeting the ADA's aspiration to keep up with technological advances, a comprehensive examination is needed.¹⁴

Part II will discuss the gaps found in the language and regulations implementing the ADA, with respect to digital accessibility. Part III will discuss how those gaps affect individuals with disabilities in the areas of employment, education, public accommodations, and access to public services. Part IV will suggest the statutory or regulatory changes that could help close this gap so that the ADA meets its aspiration of keeping pace with technological advances.

II. GAPS IN LANGUAGE AND REGULATIONS

A. *New or Altered Facilities*

The way the ADA attains accessibility is complicated by differing rules depending on where and how an individual desires to use a service or activity.¹⁵ This section will try to offer a guidepost to rules regarding accessibility, pointing out the coverage gaps that adversely affect individuals with disabilities.

The ideal situation is one in which facilities and services are initially designed in an accessible way. If this were always true, no special rules about modifying facilities or services to create accessibility would be needed. This concept, coined by Ronald Mace as "universal design," emphasizes the

complaint-intervention/download.

14. For one scholarly discussion of an aspect of this issue, see Bradley A. Areheart & Michael Ashley Stein, *Integrating the Internet*, 83 GEO. WASH. L. REV. (forthcoming 2015) (manuscript at 8–13) (on file with author). The authors note, "The Internet is an indispensable part of day-to-day life in the modern world. Core life activities . . . are increasingly digitalized. However, unless attention is given to accessibility, the inevitable result will be shifting the exclusion of people with disabilities from physical spaces to virtual ones." *Id.*

15. The applicability of the various provisions of the ADA are context specific. For example, a different set of rules apply in the context of employment than when determining the accessibility of a public service by disabled persons. Compare 42 U.S.C. § 12111(2), (8) (2012) (defining, for purposes of discrimination in employment, the terms "covered entity" and "qualified individual"), and *id.* § 12112(a) ("No *covered entity* shall discriminate against a *qualified individual*" (emphasis added)), with *id.* § 12131 (defining, for purposes of discrimination in relation to public services, the terms "public entity" and "qualified individual with a disability"), and *id.* § 12132 ("[N]o *qualified individual with a disability* shall, by reason of such disability, be excluded from participation in or be denied the benefits . . . of a *public entity*." (emphasis added)).

importance of building facilities or services with the expectation that everyone will be able to use them.¹⁶

The ADA partially reflects this principle. Title III, which covers private facilities,¹⁷ requires that all “public accommodations” and “commercial facilities” be designed and constructed such that they “are readily accessible to and usable by individuals with disabilities, except where an entity can demonstrate that it is structurally impracticable to meet the requirements of such subsection in accordance with standards set forth or incorporated by reference in regulations issued under [Title III].”¹⁸ Similar principles apply to facilities that are substantially altered.¹⁹ The altered portions of these facilities are supposed to be accessible “to the maximum extent feasible.”²⁰

Title II, which covers public services provided by state and local government entities, has similar rules that are implemented through regulations.²¹ New construction must be “readily accessible to and usable by individuals with disabilities,” except “in those rare circumstances” when “it is structurally impracticable to meet the requirements.”²² Similarly, the regulations provide that altered portions of facilities must be accessible “to the maximum extent feasible.”²³

When enacted in 1990, these stringent standards were imposed with the expectation that facilities would be newly constructed or substantially altered in the near future—subjecting them to heightened standards of

16. See Ronald L. Mace, *FAIA*, UNIVERSALDESIGN.COM, http://www.universaldesign.com/index.php?option=com_content&view=article&id=88:ronald-l-mace-faia&catid=2196:universal-design&Itemid=2931 (last visited on Apr. 8, 2015); see also *What is Universal Design?*, UNIVERSALDESIGN.COM, <http://www.universaldesign.com/about-universal-design.html> (last visited on Apr. 8, 2015).

17. See 42 U.S.C. § 12181(7) (“The following *private entities* are considered *public accommodations* for purposes of this subchapter . . .” (emphasis added)).

18. *Id.* § 12183(a)(1); see *id.* § 12181(2), (7) (defining “commercial facilities” and “public accommodation”).

19. See *id.* § 12183(a)(2).

20. *Id.*

21. See *id.* §§ 12131(1)(A)–(B); 12134(a); see generally 28 C.F.R. §§ 35.149–.152 (2014).

22. 28 C.F.R. § 35.151(a)(1)–(2)(i) (The “structurally impracticable” exception arises “in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features.”).

23. *Id.* § 35.151(b)(1). There is an exception for historic properties. *Id.* § 35.151(b)(3).

accessibility.²⁴ In the meantime, more lenient rules would apply for making existing facilities accessible.²⁵ Because retrofitting tends to be more expensive than making accessibility a part of the original structure,²⁶ Congress “str[uck] a balance between guaranteeing access to individuals with disabilities and recognizing the legitimate cost concerns of businesses and other private entities.”²⁷ The result is the most stringent requirements apply only “where accessibility [could] be more conveniently and economically incorporated in the initial stages of design and construction.”²⁸

When Congress initially addressed physical accessibility, it was primarily concerned with physical barriers that impede individuals who use wheelchairs, not technological barriers that impede individuals who need accommodations to read print.²⁹ For example, the statute and regulations refer explicitly to “individuals who use wheelchairs” when describing what it means for a facility to be accessible.³⁰ The overall expectation was that individuals with disabilities use facilities by entering them.³¹ As the world has evolved, and individuals with disabilities use facilities through digital technology, that expectation is no longer accurate. Individuals with visual or learning disabilities can find themselves barred from facilities in the virtual world rather than in the physical world.³²

Although litigation continues to occur,³³ it is common for new facilities

24. See 28 C.F.R. pt. 36, app. B, § 36.304, at 687 (2002).

25. See *id.*

26. See *id.*; see also 28 C.F.R. § 36.403(a)(2) (stating retrofitting is not required “to reflect the incremental changes in the 2010 Standards solely because of an alteration to a primary function area served by [a] path of travel” that was previously constructed or altered “in accordance with the specifications in the 1991 Standards”); *Web Accessibility Frequently Asked Questions*, CAL. STATE UNIV., http://www.calstate.edu/accessibility/webaccessibility/web_accessibility_FAQs.shtml#q3 (last visited Apr. 8, 2015) (discussing expense of retrofitting software in comparison with creating it initially in an accessible format).

27. See 28 C.F.R. pt. 36, app. B, § 36.304, at 687.

28. See *id.*

29. See, e.g., 42 U.S.C. § 12182(b)(2)(A)(iv) (describing discrimination as failure to remove *structural* barriers).

30. See, e.g., *id.* § 12183(a)(2) (2012); 28 C.F.R. § 35.151(b)(4) (2014).

31. See, e.g., *id.* § 12183(a)(2) (stating altered portions of a facility must be “usable by . . . individuals who use wheelchairs”).

32. See Decarr, *supra* note 9; Areheart & Stein, *supra* note 14, (manuscript at 2–3).

33. For example, Hollister stores violated Title III because their basic design included a front entrance with steps. See Kevin Williams, *Hollister Stores Must Provide Equal Access to Customers Who Use Wheelchairs at 248 Stores Across the Nation*, CCDC

to have an accessible entrance, accessible bathrooms, and other basic features that make the facilities available to people who use wheelchairs. It is less common, however, for entities to think about digital accessibility when they design and construct new facilities, as we will see in some of the examples discussed below.

B. Existing Facilities

1. Public Accommodations

The highest standards exist for new construction and major alterations of existing facilities.³⁴ The rules get much more complicated for existing facilities that have not been substantially renovated.

For a private entity, existing facilities are subject to rules for providing accessibility only if those facilities meet the definition of a “public accommodation.”³⁵ A commercial facility that is not a public accommodation has no obligation under Title III to become accessible if it is not subject to the new construction or alteration rules.³⁶ The theory behind this distinction is that public accommodations include most facilities that individuals with disabilities are likely to want to use, such as supermarkets, restaurants, hotels, and doctor’s offices.³⁷ Other facilities, such as warehouses that are not open to the public, are required to be accessible when they are newly built or substantially renovated.³⁸ However, as discussed below, these commercial facilities might have to be modified to become accessible if an employee with a disability needs to access the facility.³⁹ Thus, an individual with a disability in a non-employment context can seek to have a private facility made accessible only if that facility is

(Jan. 24, 2013), http://ccdconline.org/press_release/january-24-2013/hollister-stores-must-provide-equal-access-customers-who-use-wheelchair.

34. See *supra* notes 21–23 and accompanying text.

35. See 42 U.S.C. § 12183(a); see also *id.* § 12181(7) (listing 12 categories of private entities that are considered public accommodations).

36. See *id.* § 12182(a) (prohibiting discrimination only by public accommodations); *id.* § 12183(a) (prohibiting discrimination by a commercial facility which is newly constructed or is subjected to substantial alterations).

37. See *id.* § 12181(7).

38. See *supra* notes 21–23 and accompanying text.

39. See *infra* Part II.B.3; see also 42 U.S.C. §§ 12111(9)(A); 12112(a), (b)(5)(A) (providing the ADA requirements for reasonable accommodations of disabled persons in the employment context).

covered by the definition of a “public accommodation.”⁴⁰

Covered, existing public accommodations, which have architectural or communication barriers, only need to remove barriers to accessibility if doing so is “readily achievable.”⁴¹ “The term ‘readily achievable’ means easily accomplishable and able to be carried out without much difficulty or expense.”⁴² Because of the expense of retrofitting, it is more difficult to demand accessibility at an existing facility than at a new or substantially altered facility.⁴³

With respect to covered public accommodations, a new legal issue has been whether the public accommodation’s website is covered by Title III’s accessibility rules.⁴⁴ The problem, as discussed extensively by Bradley Areheart and Michael Stein, is that some courts conclude that discrimination is only covered by Title III if it occurs at a physical venue or in an area that has “a sufficient nexus to an actual tangible place of accommodation.”⁴⁵ Although some courts have concluded that the website of a covered entity is not covered by the ADA,⁴⁶ many companies have recently entered into settlement agreements to provide such accessibility.⁴⁷ These settlements have resulted in increased accessibility of existing websites, not simply new

40. See 42 U.S.C. § 12182(a); see also *id.* § 12181(7).

41. *Id.* § 12182(b)(2)(A)(iv).

42. *Id.* § 12181(9).

43. See 28 C.F.R. pt. 36, app. B, § 36.304, at 687 (2002) (implying that retrofitting is less “readily achievable”).

44. Areheart & Stein, *supra* note 14, (manuscript at 2–3).

45. *Id.* at 21–22 (citations omitted).

46. See *id.* at 21 n.113 (“The Third, Fifth, Sixth, and Ninth Circuits have all held the ADA prohibits only discrimination at or in a physical place of public accommodation.”) (citations omitted); see also *Access Now, Inc. v. Sw. Airlines Co.*, 227 F. Supp. 2d 1312, 1321 (S.D. Fla. 2002) (holding because the website did not exist in any particular physical location, it could not be shown that impeded access to the site by disabled persons would permit relief under Title III of the ADA); but see *Nat’l Fed’n of the Blind v. Target Corp.*, 452 F. Supp. 2d 946, 956 (N.D. Cal. 2006) (holding the allegation “that the inaccessibility of Target.com impedes the full and equal enjoyment of goods and services offered in Target stores,” sufficiently states a claim for relief).

47. See, e.g., Consent Decree, *supra* note 13; see also *Achieving the Promise of the Americans with Disabilities Act in the Digital Age—Current Issues, Challenges, and Opportunities: Hearing before the Subcomm. on the Constitution, Civil Rights, and Civil Liberties of the H. Comm. on the Judiciary*, 111th Cong. 84–89 (2010) (statement of Daniel F. Goldstein, Partner, Brown, Goldstein & Levy, LLP) (discussing settlements of case involving website accessibility) [hereinafter Goldstein Statement].

websites.⁴⁸

Because courts and companies are beginning to understand the importance of website access for existing entities covered by Title III, and because Areheart and Stein have already discussed this issue at length, this Article will not focus extensively on the problems regarding website accessibility for the products available to the public at Title III covered entities. Instead, this Article will focus on other aspects of software incompatibility and inaccessibility that negatively impact many individuals with disabilities. In addition to being covered by the ADA under the existing facilities standards, this Article will argue that major alterations in software by public accommodations should be governed by the same high standards that apply to major alterations of physical space. Public accommodations should be required to choose software in a way that reflects the “maximum extent feasible” rule that applies to alterations⁴⁹ rather than the more lenient rules that apply to existing facilities.⁵⁰

2. *Public Entities*

The existing facilities and programs at public entities are held to a more comprehensive standard under Title II than Title III. Title II regulations state: “[a] public entity shall operate each service, program, or activity so that the service, program, or activity, when viewed in its entirety, is readily accessible to and usable by individuals with disabilities.”⁵¹ A defense is available to a public entity when “it can demonstrate [that the requested action] would result in a fundamental alteration in the nature of a service, program, or activity or in undue financial and administrative burdens.”⁵² This rule seems rigorous because it places the burden of proof on the public entity to demonstrate it cannot make the requested action;⁵³ however, the regulations also provide that the general accessibility rule “does not . . . [n]ecessarily require a public entity to make each of its existing facilities accessible to and usable by individuals with disabilities.”⁵⁴ Thus, the

48. See Goldstein Statement, *supra* note 47, at 87–88 (noting that “companies with commercial websites have reached out proactively to secure certification . . . that their websites are accessible . . .”).

49. See 42 U.S.C. § 12183(a)(2) (2012).

50. See *supra* notes 41–43 and accompanying text.

51. 28 C.F.R. § 35.150(a) (2014).

52. *Id.* § 35.150(a)(3).

53. See *id.*

54. *Id.* § 35.150(a)(1).

regulations suggest that services, programs, and activities should be accessible in their entirety, but not necessarily individually. Unlike the rule governing private entities, however, all public entities are covered by this rule.⁵⁵

For both public and private entities, the existing facilities rules explicitly cover the programs or activities of the entity, not just its physical structure.⁵⁶ The Title II regulations refer to the “operat[ion of] each service, program, or activity.”⁵⁷ Similarly, the Title III statutory language prohibits discrimination in “the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation.”⁵⁸ This language suggests that existing entities should be modified to be accessible even if the accessibility limitations are not physical in nature (like steps that impede access by a wheelchair).

However, the statutory and regulatory language is unclear and spawns conflicting legal decisions about the coverage of nonphysical access.⁵⁹ For new and altered facilities, the statutory and regulatory language seems to be referring to *physical* barriers with use of terms such as “structurally impracticable.”⁶⁰ Similarly, for existing facilities, Title III statutory language refers to the removal of “architectural barriers, and communication barriers that are structural in nature.”⁶¹ The reference to barriers that are “structural in nature” implies a reference to a physical barrier.⁶² A “communication barrier,” however, could arguably include an inaccessible website or digital technology.⁶³ Further, the next statutory provision provides that when a barrier cannot be removed, the covered entity must “make such goods, services, facilities, privileges, advantages, or accommodations available

55. Compare 42 U.S.C. § 12131(1) (2012), and 28 C.F.R. § 35.150(a), with 42 U.S.C. § 12181(7).

56. See 42 U.S.C. § 12182(a); 28 C.F.R. § 35.150(a).

57. 28 C.F.R. § 35.150(a).

58. 42 U.S.C. § 12182(a).

59. Compare *Access Now, Inc. v. Sw. Airlines, Co.*, 227 F. Supp. 2d 1312, 1314, 1321 (S.D. Fla. 2002) (holding absent a physical nexus between the website and a particular location, there existed no coverage of a private entity’s website under Title III of the ADA), with *Nat’l Fed’n of the Blind v. Target Corp.*, 452 F. Supp. 2d 946, 956 (N.D. Cal. 2006) (holding Title III of the ADA is expansive enough to cover the accessibility of a private entity’s website).

60. 42 U.S.C. § 12183(a)(1).

61. *Id.* § 12182(b)(2)(A)(iv).

62. See *id.*

63. See *id.*

through alternative methods.”⁶⁴ The word “facilities” is only one word on a list that also references goods, services, privileges, advantages, and accommodations—this list suggests a broader conception of accessibility than just physical accessibility.⁶⁵ Yet, there is no reference to goods, services, privileges, and advantages in the provision on new construction or substantial alteration of existing facilities.⁶⁶ It is therefore not surprising that courts have struggled to determine the scope of the mandate to provide accessibility to new, altered, and existing facilities.

3. *Employment*

Although a major goal in the passage of the ADA in 1990 was improving rates of employment for individuals with disabilities,⁶⁷ it has proven elusive.⁶⁸ As detailed in a comprehensive report authored by the National Council on Disability, “[I]n May 2010, 22.3 percent of people in the labor force in the United States had disabilities, compared with the 70.1 percent with no disability. The unemployment rate for those with disabilities was 14.7 percent, compared with 9.1 percent for persons with no disability.”⁶⁹ Their comprehensive report argued that lack of access to digital technology is one major factor impeding the employment of individuals with disabilities.⁷⁰

In theory, Title I, which bans discrimination in employment,⁷¹ can address some of the problems relating to technological inaccessibility. Title I does not refer specifically to facility accessibility, but it does provide that entities must make reasonable accommodations “unless such covered entity can demonstrate that the accommodation would impose an undue hardship

64. *Id.* § 12182(b)(2)(A)(v).

65. *See id.*

66. *See id.* § 12183(a).

67. *See generally* Americans with Disabilities Act of 1990, Pub. L. No. 101-336, § 2(a)(2)–(3), 104 Stat. 327, 329 (codified at 42 U.S.C. § 12101(a)(2)–(3) (2012)).

68. *See* 42 U.S.C. § 12101(a)(3) (“[D]iscrimination against individuals with disabilities persists in . . . employment . . .”).

69. NAT’L COUNCIL ON DISABILITY, THE POWER OF DIGITAL INCLUSION: TECHNOLOGY’S IMPACT ON EMPLOYMENT OPPORTUNITIES FOR PEOPLE WITH DISABILITIES 36 (2011) (citing OFFICE OF DISABILITY EMP’T POLICY, A WORLD IN WHICH PEOPLE WITH DISABILITIES HAVE UNLIMITED EMPLOYMENT OPPORTUNITIES (2010)), http://www.ncd.gov/rawmedia_repository/c0d43e56_63e1_42a3_bcf7_2c8c99c4d462?document.pdf.

70. *See id.*

71. *See* 42 U.S.C. § 12112(a).

on the operation of the business of such covered entity.”⁷² For employees, Title II and Title III accessibility rules work in tandem with the Title I reasonable accommodation rule.⁷³ For example, if an individual with a disability works at a retail establishment, then the facility must meet the Title III accessibility standards.⁷⁴ Those accessibility standards alone, however, do not necessarily create complete accessibility for all individuals with disabilities—the employee may have to request an individualized accommodation, such as the acquisition of screen reader technology.⁷⁵

The difference between the Title I obligation and the Title II and III obligations becomes crucially important when one considers a substantial renovation. Does that renovation trigger any obligations to aspects of the facility used only by employees? Alterations must meet the “maximum extent feasible” standard, which is higher than the “undue hardship” defense for reasonable accommodations.⁷⁶

What if the renovations include digital upgrades? What if those digital upgrades affect employees? This example can pose the greatest challenge in trying to figure out the space between Title I, and Titles II and III. Does Title I impose *ex ante* obligations on employers in making decisions about digital accessibility beyond those required by Titles II and III? In other words, even if one concluded that software upgrades are not covered by the Title II or Title III alteration rules,⁷⁷ does an employer have an obligation akin to the Title II or Title III obligations to make software decisions that are accessible to the maximum extent feasible?

One possible source of an *ex ante* obligation could be the rule about

72. *Id.* § 12112(b)(5)(A).

73. *See id.* § 12111(9)(A).

74. *See id.* §§12111(9)(A); 12181(7)(E); 12182(a).

75. *See id.* § 12112(5)(A) (Discrimination includes “not making reasonable accommodations to the *known* physical or mental limitations of an otherwise qualified individual with a disability.” (emphasis added)).

76. *Compare id.* § 12183(a)(2) (requiring alterations to be made “in such a manner that, to the *maximum extent feasible*, the altered portion of the facility are readily accessible to and usable by individuals with disabilities” (emphasis added)), *with id.* § 12111(10) (“The term ‘*undue hardship*’ means an action requiring significant difficulty or expense.” (emphasis added)), *and id.* § 12112(b)(5)(A) (excusing the reasonable accommodation requirement if such “accommodation would impose an undue hardship on the operation of the business of [the] covered entity”).

77. *See, e.g., supra* note 46 and accompanying text.

selection criteria found in Title I.⁷⁸ That rule provides that it is discrimination for an employer to use “selection criteria that screen out or tend to screen out an individual with a disability or a class of individuals with disabilities unless the . . . selection criteria, as used by the covered entity, is shown to be job-related for the position in question and is consistent with business necessity.”⁷⁹

From a digital perspective, the selection criteria rule means that employers should consider whether their choice of software and other digital infrastructure is consistent with business necessity before they employ an individual with a visual disability—their choice could create an implicit selection criteria of “sightedness” that was not mandated by business necessity.⁸⁰ Like the other rules, the statutory language could be clearer.⁸¹ Software decisions are not typically thought of as “selection criteria,” even though a choice of inaccessible software can create an adverse effect against individuals with disabilities.⁸² Application of the “effect” rule⁸³ and the “selection criteria” rule⁸⁴ helps reach the result of an *ex ante* obligation to consider the accessibility of software—even if the employer has no employees with visual or learning disabilities who need such software to perform their jobs.⁸⁵

This Article argues that it is crucial the ADA be interpreted to require new and altered facilities to include full digital accessibility. It is also crucial that employers are understood to have broad accessibility obligations under Title I so that they make basic design decisions in a way that does not allow them to implicitly make an employee’s ability to read print part of the selection criteria. This interpretation will help the ADA attain accessibility for the broadest possible population of individuals with disabilities. It will

78. *See* 42 U.S.C. § 12112(b)(6).

79. *Id.*

80. *See id.*

81. *See id.*

82. *See* Areheart & Stein, *supra* note 14, (manuscript at 9).

83. 42 U.S.C. § 12112(b)(3)(A).

84. *Id.* § 12112(b)(6).

85. *See id.* § 12112(b)(3)(A) (stating that discrimination on the basis of disability includes using “standards, criteria, or methods . . . that have the effect of discrimination on the basis of disability”); *id.* § 12112(b)(6) (stating that discrimination on the basis of disability includes “using . . . selection criteria that screen out or tend to screen out an individual with a disability . . . unless . . . [it] is shown to be job-related . . . and is consistent with business necessity”).

also be efficient—retrofitting software and other digital technology after the fact is much more expensive and difficult than creating digital technology in an accessible format in the first instance.⁸⁶

Drafted in the late 1980s, when people were just beginning to use personal computers, it is no surprise that the ADA statutory and regulatory language did not contemplate the digital universe.⁸⁷ Now that telecommuting is common and individuals with certain disabilities require accessible software, it is crucial that the accessibility rules consider digital accessibility in measuring compliance with the ADA.

4. Education

Education is a crucial aspect of the lives of individuals with disabilities. For students with disabilities in K-12, the Individuals with Disabilities Education Act (IDEA)⁸⁸ and Section 504 of the Rehabilitation Act⁸⁹ help them attain a free and appropriate public education. When individuals transition to higher education, they typically use Section 504 of the Rehabilitation Act, Title II (public education),⁹⁰ or Title III (private education)⁹¹ to seek access to education in a nondiscriminatory and accommodating environment.

There is only one provision of the ADA that addresses testing.⁹² That provision states: “Any person that offers examinations or courses related to applications, licensing, certification, or credentialing for secondary or postsecondary education, professional, or trade purposes shall offer such examinations or courses in a place and manner accessible to persons with disabilities or offer alternative accessible arrangements for such individuals.”⁹³ That language appears to apply to *entrance examinations* to

86. See Brian Wentz et al., *Retrofitting Accessibility: The Legal Inequality of After-the-Fact Online Access for Persons with Disabilities in the United States*, FIRST MONDAY (Nov. 7, 2011), <http://firstmonday.org/ojs/index.php/fm/article/view/3666/3077#p8>.

87. See generally Americans with Disabilities Act of 1990, Pub. L. No. 101-336, § 401(a)–(d), 104 Stat. 327, 366–67 (codified as amended at 42 U.S.C. § 225 (2012)) (listing amendments in the area of telecommunications, but containing no reference to either “computers” or “internet”).

88. 20 U.S.C. § 1400(d)(1)–(4) (2012) (noting the purposes of the IDEA).

89. 29 U.S.C. § 794(b)(2)(A)–(B) (2012).

90. See 42 U.S.C. § 12131(1)(B).

91. See *id.* § 12181(7)(J).

92. See *id.* § 12189.

93. *Id.*

institutions of higher education, not routine exams that might be offered once a student is admitted to an institution of higher education.⁹⁴ That gap causes some confusion in the courts about what standard to apply to tests administered at an educational institution.⁹⁵

The limits of the IDEA are beyond the scope of this Article.⁹⁶ However, it is worth noting that it can be confusing to students to move from a highly protective regime under the IDEA in K-12 to one in which they have to engage in considerable self-advocacy under Section 504 or the ADA at the university level.⁹⁷ Self-advocacy has benefits,⁹⁸ but the K-12 experience may not prepare individuals with disabilities for the transition to the self-advocacy required in higher education even though the IDEA does require transition planning.⁹⁹

The same software issues that exist in the employment context can

94. See *id.* (emphasis added).

95. Compare *Jones v. Nat'l Conference of Bar Exam'rs*, 801 F. Supp. 2d 270, 291 (D. Vt. 2011) (requiring defendant to offer accommodations to a student taking the Multistate Professional Responsibility Examination under section 12189), with *Varad v. Barshak*, 261 F. Supp. 2d 47, 55 (D. Mass. 2003) (holding section 12189 inapplicable to the Massachusetts Board of Bar Examiners).

96. For a more in-depth discussion of this topic, see RUTH COLKER, *DISABLED EDUCATION: A CRITICAL ANALYSIS OF THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT* (2013).

97. See *A Comparison of ADA, IDEA, and Section 504*, DISABILITY RIGHTS EDUC. & DEF. FUND, <http://dredf.org/advocacy/comparison.html> (last visited Apr. 14, 2015) (noting the differences among the provisions regarding who is protected and the procedures for asserting those protections).

98. David W. Test et al., *A Conceptual Framework of Self-Advocacy for Students with Disabilities*, 26 REMEDIAL & SPECIAL EDUC. 43, 43 (2005) ("Individuals with disabilities who are strong self-advocates often challenge the perceptions of others who view them as incapable of making decisions about their own lives and needing professionals for guidance and protection." (citation omitted) (citing J. Siegel & O. Kantor, *Self-Advocacy: Change Within the Individual and the Professional*, 27 Nat'l Assoc. of Soc. Workers 451-53 (1982))).

99. See 20 U.S.C. § 1400(c)(14) (2012) ("As the graduation rates for children with disabilities continue to climb, providing effective transition services to promote successful post-school employment or education is an important measure of accountability for children with disabilities."). The transition problem is beyond the scope of this Article but is noteworthy as a continuing problem to address to create better access to higher education for individuals with disabilities. See *Students with Disabilities Preparing for Postsecondary Education: Know Your Rights and Responsibilities*, U.S. DEPT. OF EDUC. (Sept. 2011) [hereinafter *Know Your Rights*], <http://www2.ed.gov/about/offices/list/ocr/transition.html> (discussing transition planning).

affect students in higher education.¹⁰⁰ While a university may be making its public website accessible, it may not be thinking about the software that faculty, staff, and students use every day. These software choices can be decentralized, as faculty members may have the option to choose their own software or websites for courses. These choices can have a significant impact on the experiences of students and others.

III. THE IMPACT OF THE GAPS

A. Employment

Michael Leiterman's story is too familiar for those who work with individuals who are blind.¹⁰¹ Software and equipment choices by his employer had a dramatic impact on his ability to do his job.¹⁰² Those decisions, over time, made his job less accessible.¹⁰³ For example, his employer switched to the Windows 7 operating system, which exacerbated the compatibility problems he was already having with his Job Access With Speech (JAWS) software.¹⁰⁴ His employer also upgraded its phone system, so that he was no longer able to use certain features that were accessible in his previous phone.¹⁰⁵ Similarly, his employer modified its telecommuting technology in a way that precluded him from using its required security devices.¹⁰⁶

Had Leiterman's employer, the United States Department of Homeland Security, complied with the specific rules that apply to the federal

100. See *Know Your Rights*, *supra* note 99 ("Examples of adjustments are: arranging for priority registration; reducing a course load; substituting one course for another; providing note takers, recording devices, sign language interpreters, extended time for testing, and . . . equipping school computers with screen-reading, voice recognition, or other adaptive software or hardware.").

101. See generally *Leiterman v. Johnson*, No. 13-394, 2014 WL 3708040 (D.D.C. July 28, 2014).

102. *Id.* at *1-4.

103. See *id.* at *3-4.

104. *Id.* at *1-2; FREEDOM SCIENTIFIC, *Blindness Solutions: JAWS*, <http://www.freedomscientific.com/Products/Blindness/JAWS> (last visited April 21, 2015) ("JAWS, Job Access With Speech, is . . . developed for computer users whose vision loss prevents them from seeing screen content or navigating with a mouse. JAWS provides speech and Braille output . . .").

105. *Leiterman*, 2014 WL 3708040, at *2.

106. *Id.* at *3.

government, none of these problems should have occurred.¹⁰⁷ Section 508 of the Rehabilitation Act specifically requires the federal government to ensure that federal employees with disabilities “have access to and use of information and data that is comparable to the access to and use of the information and data by Federal employees who are not individuals with disabilities.”¹⁰⁸ Because the quoted rule can only be enforced through an administrative complaint, not a civil action,¹⁰⁹ Leiterman could not use it to argue in federal court that the federal government had violated that particular right.¹¹⁰ Nonetheless, he was able to survive a motion for summary judgment because he had a viable failure to accommodate claim.¹¹¹

Yasmin Reyazuddin’s case has striking similarities to Leiterman’s.¹¹² She worked at a call center for several years, and because she was blind, she used JAWS software to perform various aspects of her job.¹¹³ Montgomery County decided to build a new call center and consolidate its employees into one location.¹¹⁴ The software the county selected was not accessible to employees who are blind, and the county successfully argued at the trial court level that modifying the software to make it accessible would constitute an undue hardship.¹¹⁵ The defendant’s motion for summary judgment was granted and the case never went to the jury,¹¹⁶ although the summary judgment decision was recently reversed by the Fourth Circuit.¹¹⁷ Thus, Montgomery County made a software decision in complete disregard of the possibility that it might want to hire or retain an employee who is blind—even though Reyazuddin was already working at its call center.

As a result of these decisions, which made their workplace become less accessible over time, Leiterman and Reyazuddin found their careers

107. See 29 U.S.C. § 794d(a)(1)(A)(i) (2012).

108. *Id.*

109. See *id.* § 794d(f)(2).

110. See *Leiterman*, 2014 WL 3708040, at *8–9 (stating Leiterman could not bring a suit under Section 508’s administrative provision because Section 508 does not create a private right of action).

111. See *id.* at *11 (quoting FED. R. CIV. P. 56(d)) (quotation mark omitted).

112. Compare *Reyazuddin v. Montgomery Cnty.*, 7 F. Supp. 3d 526, 532–40 (D. Md. 2014), with *Leiterman*, 2014 WL 3708040, at *1–4.

113. *Reyazuddin*, 7 F. Supp. 3d at 532.

114. *Id.*

115. *Id.* at 533; see *id.* at 549.

116. *Id.* at 561.

117. See *Reyazuddin v. Montgomery County*, No. 14-1299, 2015 WL 3651710, at *1 (4th Cir. June 15, 2015).

languish. Leiterman was passed over for promotion,¹¹⁸ and Reyazuddin was transferred to make-work positions where she did not have enough work to occupy her fully for an eight-hour day.¹¹⁹

The discrimination that Leiterman and Reyazuddin have faced at the workplace is similar to that faced by Thomas Carter, who was a blind employee of the United States Army.¹²⁰ As the Army's own internal documentation reflected, he was not given meaningful work to perform starting in 1989 because he was not offered "a reader nor computer aided reading device."¹²¹ Carter was assigned duties at the GS-3 level even though he was given the job classification of a GS-10 level.¹²² The court denied summary judgment to the United States Army, finding that an adverse employment action can occur without tangible economic consequences.¹²³ In all three cases, an employee who was blind was unable to perform up to his or her potential because of a lack of accessibility at the workplace. *Carter v. White* was a 2002 decision, but *Leiterman* and *Reyazuddin*, both of which were decided in 2014, represent the ongoing nature of this problem.

B. Education

Because online material is a common aspect of higher education, students who are blind may be excluded from the full educational experience.¹²⁴ If they are admitted to a program, they may find themselves unable to obtain an appropriate education.¹²⁵ Similar barriers also face students with hearing impairments.¹²⁶

118. See *Leiterman v. Johnson*, No. 13-394, 2014 WL 3708040, at *4 (D.D.C. July 28, 2014).

119. See *Reyazuddin*, 7 F. Supp. 3d at 535.

120. See *Carter v. White*, No. IP 01-0575-C H/F, 2002 WL 31045355, at *1 (S.D. Ind. Aug. 6, 2002) (quoting *Carter Dep.*, Ex. 20).

121. *Id.* at *3.

122. *Id.* at *10.

123. *Id.* at *12-13.

124. See *supra* note 104 and accompanying text.

125. See *id.*

126. See, e.g., *Se. Cmty. Coll. v. Davis*, 442 U.S. 397 (1979); see also Laura Rothstein, *Forty Years of Disability Policy in Legal Education and the Legal Profession: What has Changed and What are the New Issues?*, 22 AM. U.J. GENDER SOC. POL'Y & L. 519, 577 (2014) (discussing *Davis*). There are many cases involving students with disabilities who face discrimination at postsecondary educational institutions. See, e.g., Rothstein, *supra*, at 547-51 (discussing the impact of learning and related disabilities on legal education and the legal profession). This Article primarily focuses on individuals who have visual

Students with hearing or visual impairments who seek to pursue careers in medicine often face significant discrimination. *Southeastern Community College v. Davis* is a well-known example, brought under Section 504 by an applicant to a medical program.¹²⁷ Davis was a licensed practical nurse (LPN) who sought to become a licensed registered nurse (LRN).¹²⁸ She attended one year of school at Southeastern Community College in its College Parallel Program to prepare her for the Associate Degree Nursing Program.¹²⁹ The admissions review committee decided her “severe hearing impairment”¹³⁰ would make it unlikely that she would be licensed to work as a LRN upon graduation, and rejected her from the associate degree program.¹³¹ The college raised concerns that Davis would have difficulty communicating in an operating room where everyone wore surgical masks or in a setting where the doctor had to use vocal means to get a nurse’s attention, because she used lip reading in conjunction with a hearing aid to follow verbal communication.¹³² The district court entered judgment in favor of the college.¹³³ The Fourth Circuit reversed, finding that the college could only focus on Davis’s academic and technical qualifications, and not her disability, in making the admissions decision.¹³⁴ The court of appeals also stated that the district court, on remand, should consider what modifications the college could make to its program to “compensate for plaintiff’s hearing disability.”¹³⁵

The Supreme Court reversed the court of appeals but essentially agreed with its reasoning: a university needs to engage in “modifications” to make a postsecondary educational program accessible to an individual with a disability—including “provid[ing] ‘auxiliary aids’ such as sign-language interpreters.”¹³⁶ Although this decision preceded the Internet and

or hearing impairments, although many of the principles discussed in this Article would apply to other categories of disabilities as well.

127. *See Davis*, 442 U.S. at 400.

128. *See Davis v. Se. Cmty. Coll.*, 424 F. Supp. 1341, 1342 (E.D. N.C. 1976), *vacated in part*, 574 F.2d 1158 (4th Cir. 1978), *rev’d*, 442 U.S. 397 (1979).

129. *Id.*

130. *Id.*

131. *Id.* at 1344.

132. *See id.* at 1343.

133. *Id.* at 1346.

134. *Davis v. Se. Cmty. Coll.*, 574 F.2d 1158, 1161 (4th Cir. 1978), *rev’d*, 442 U.S. 397 (1979).

135. *See id.* at 1162.

136. *Se. Cmty. Coll. v. Davis*, 442 U.S. 397, 404, 408 (1979) (citing 45 C.F.R. § 84.44

modifications made possible by computer technology were not a part of the Court's decision, the case created an important blueprint for future education cases involving individuals with disabilities by recognizing the right to reasonable modifications and auxiliary aids to attain accessibility. The Court said, "Technological advances can be expected to enhance opportunities to rehabilitate the handicapped or otherwise to qualify them for some useful employment."¹³⁷ Further, the Court noted that "[i]dentification of those instances where a refusal to accommodate the needs of a disabled person amounts to discrimination against the handicapped continues to be an important responsibility of [the Department of Health, Education, and Welfare]."¹³⁸ It therefore enshrined the concept of "reasonable accommodations" into the law of disability discrimination.¹³⁹ Although the Court found the requests made by this particular plaintiff were "more than the 'modification' the regulation requires," it recognized the possibility that modifications or auxiliary aids might be available to other students in the future.¹⁴⁰ Unfortunately, it would take a couple of decades before that blueprint led to meaningful opportunities for many students with disabilities, especially in the medical field.

The first reported victory for an applicant with a disability to a medical program occurred with the Tenth Circuit's decision in *Pushkin v. Regents of the University of Colorado*.¹⁴¹ Joshua Pushkin, who had multiple sclerosis, completed medical school and sought admission to a psychiatric residency program.¹⁴² Unlike *Davis*, he sought no accommodations for his disability.¹⁴³ Pushkin merely sought nondiscriminatory treatment.¹⁴⁴ The university denied admission based on "their concern for psychologic reactions of the

(1978)).

137. *Id.* at 412.

138. *Id.* at 413.

139. See Brigid Hurley, Note, *Accommodating Learning Disabled Students in Higher Education: Schools' Legal Obligations Under Section 504 of the Rehabilitation Act*, 32 B.C. L. REV. 1051, 1065 (1991) ("Following *Davis*, courts began to recognize that a determination of whether a handicapped student is 'otherwise qualified' necessarily involves an inquiry into reasonable accommodations." (citing *Doherty v. S. Coll. of Optometry*, 862 F.2d 570, 575 (6th Cir. 1988)).

140. *Davis*, 442 U.S. at 408, 410.

141. See generally *Pushkin v. Regents of the Univ. of Colo.*, 658 F.2d 1372 (10th Cir. 1981).

142. *Id.* at 1376.

143. See *id.*

144. See *id.*

patient and in turn the doctor, as a result of his being in a wheelchair.”¹⁴⁵ As the district court found, and the court of appeals agreed, those views were based on “psychologic theory” rather than on an individualized assessment of Pushkin’s actual qualifications.¹⁴⁶ The *Pushkin* case stands for the proposition that courts need not always defer to a medical school’s judgment about the qualifications needed to enter its program, but the case did little to advance the law with respect to the issue of what kinds of modifications or accommodations are appropriate.

The next major case concerning an applicant to a medical program who was denied admission involved an individual with a visual disability.¹⁴⁷ Cheryl Fisher became blind “during her junior year of undergraduate study at [Case Western.]”¹⁴⁸ She completed her chemistry degree and sought admission to medical school.¹⁴⁹ Every medical school to which she applied, including Case Western University Medical School, denied her admission.¹⁵⁰ Fisher filed a complaint with the Ohio Civil Rights Commission against Case Western.¹⁵¹ A hearing officer initially ruled in favor of the university.¹⁵² The Ohio Civil Rights Commission reviewed the hearing officer’s decision, found the university discriminated against Fischer, and “ordered [the university] to admit Fischer to its next class.”¹⁵³ The university then appealed the commission’s decision to a state court, which affirmed the commission’s order.¹⁵⁴ An Ohio Court of Appeals reversed and the commission appealed the case to the Ohio Supreme Court.¹⁵⁵

The Ohio Supreme Court ruled in favor of the university, finding that “the trial court abused its discretion in finding that . . . Fischer was ‘otherwise qualified’ for admission with reasonable accommodations.”¹⁵⁶ One factor that weighed heavily in the Ohio Supreme Court’s decision was

145. *Id.* at 1386.

146. *See id.* at 1391.

147. *See generally* Ohio Civil Rights Comm’n v. Case W. Reserve Univ., 666 N.E.2d 1376 (Ohio 1996).

148. *Id.* at 1379.

149. *Id.*

150. *Id.* at 1380 n.1.

151. *Id.* at 1380, 1382.

152. *See id.* at 1382.

153. *Id.*

154. *Id.*

155. *Id.*

156. *Id.* at 1385.

a 1979 Report of the Association of American Medical Colleges stating that candidates for a medical school degree must have the ability “to observe demonstrations and experiments in the basic sciences.”¹⁵⁷ Further, the court concluded that it should exercise “considerable judicial deference” in evaluating the university’s academic decision because “[c]ourts are particularly ill-equipped to evaluate academic requirements of educational institutions.”¹⁵⁸ Thus, the Ohio Supreme Court rejected the recommendations of the Ohio Civil Rights Commission concerning accommodations that would have allowed Fischer to successfully complete medical school.¹⁵⁹ Even though she was academically qualified, she was not permitted to attend medical school.¹⁶⁰

When Fischer applied to medical school in 1987,¹⁶¹ the world was not as dependent on computer technology as it is today. Greater access to computer technology should make it easier for a student to pursue higher education in scientific fields, but because of poor software decisions, this reality is not always realized.¹⁶²

Consider Aleeha Dudley’s story.¹⁶³ Aleeha Dudley, who is blind, enrolled at Miami University of Ohio to major in zoology and eventually apply to a veterinarian program.¹⁶⁴ Similar to *Reyazuddin v. Montgomery County*, discussed in Part III.A, *supra*, Dudley’s accessibility challenges were caused by software procurement decisions.¹⁶⁵ Although the university admitted her into the program, it chose inaccessible course software and failed to offer her timely access to course materials and tactile graphics.¹⁶⁶

157. *Id.* at 1379 (quoting ASS’N OF AM. MED. COLLS., REPORT OF THE SPECIAL ADVISORY PANEL ON TECHNICAL STANDARDS FOR MEDICAL SCHOOL ADMISSION (1979)).

158. *Ohio Civil Rights Comm’n*, 666 N.E.2d at 1386 (citing Bd. of Curators of Univ. of Mo. v. Horowitz, 435 U.S. 78, 92 (1978); Regents of Univ. of Mich. v. Ewing, 474 U.S. 214, 226 (1985); Doe v. N.Y. Univ., 666 F.2d 761, 775–76 (2d Cir. 1981)).

159. *See Ohio Civil Rights Comm’n*, 666 N.E.2d at 1382.

160. *See id.* at 1387.

161. *Id.* at 1380.

162. *See e.g.*, Complaint, Dudley v. Miami Univ., No. 1:14-cv-38 (S.D. Ohio, Jan. 10, 2014) [hereinafter Dudley Complaint].

163. *See generally id.*

164. *Id.* at ¶ 1.

165. *See id.* at ¶ 9; *cf. Reyazuddin v. Montgomery Cnty.*, 7 F. Supp. 3d 526, 533 (D. Md. 2014); *supra* note 119, and accompanying text.

166. Dudley Complaint, *supra* note 162, at ¶ 2. Miami uses “an inaccessible Internet-based application, to distribute and collect coursework.” *Id.* at ¶ 93. As a zoology major,

Further, the online student services portal had inaccessible features that precluded her from registering for classes independently.¹⁶⁷ Her instructors sometimes made software decisions that impeded her access to instruction. For example, her Biological Concepts instructor used a software program called LearnSmart to manage homework assignments; it was inaccessible to Dudley.¹⁶⁸

Dudley routinely did not have access to graphics in her texts because of poor choices in how to make her books accessible to her; this lack of access negatively affected her grades.¹⁶⁹ She also did not have access to material needed in her math class.¹⁷⁰ These software decisions by the university and her individual faculty members caused her to take “on average three times longer than her sighted peers to complete the assignments.”¹⁷¹ Further, as touchscreens became common around the campus, Dudley found herself unable to access the laundry machines or use the dining hall during certain hours.¹⁷²

Rather than acquire Braille versions of her textbooks or digital versions that were compatible with JAWS (Dudley’s accessibility software), the university simply scanned the hard copies of her textbooks.¹⁷³ A scanned copy is “nearly useless” to a reader who is blind.¹⁷⁴ Until the university “acquired a talking LabQuest device,” she could not conduct experiments in her chemistry class.¹⁷⁵ Her Biological Concepts instructor “did not permit [her] to participate fully in lab experiments, in part because of mistaken beliefs about the capabilities of blind people.”¹⁷⁶

she needed to participate in labs and use tactile graphics to learn certain material. *Id.* at ¶ 3.

167. *Id.* at ¶ 94.

168. *Id.* at ¶ 33, 37–38, 44, 61.

169. *See id.* at ¶ 36.

170. *See id.* at ¶ 68.

171. *Id.* at ¶ 68.

172. *Id.* at ¶ 99.

173. *Id.* at ¶ 27.

174. *Id.* at ¶ 28. Dudley requested textbooks in Braille, her primary reading method, although she could use JAWS for translation into refreshable Braille when the material was made available in digital format. *See id.* at ¶¶ 4–5. In one of her courses, her professor used PDF files, rather than a coursebook, for class material. *Id.* at ¶ 59. The PDFs were not accessible in JAWS. *See id.* at ¶ 60.

175. *Id.* at ¶ 34.

176. *Id.* at ¶ 40.

Several themes emerge from Dudley's experience at Miami University. First, software decisions are chaotic.¹⁷⁷ Second, educational institutions often do not understand the range of tools needed to have full access to course materials.¹⁷⁸ Finally, accessibility responsibilities often become the individual's, rather than the institution's.¹⁷⁹ Dudley's case against Miami University is in pre-trial and may settle. The Department of Justice has recently sought to intervene in the case,¹⁸⁰ and Dudley has withdrawn from Miami University.¹⁸¹

A recent case from Iowa, *Palmer College of Chiropractic v. Davenport Civil Rights Commission*, reflects another example of a university failing to accommodate a student pursuing education in a scientific field who was blind.¹⁸² Aaron Cannon was admitted to Palmer College of Chiropractic's Bachelor of Science program.¹⁸³ He informed the admissions office that he was blind when he applied and was provisionally admitted to the graduate program—even though the college had implemented technical standards that would have precluded his admission.¹⁸⁴ After achieving a grade point average of 3.44 on a 4.00 scale,¹⁸⁵ Cannon withdrew from the graduate program because it was impossible to continue without appropriate accommodations.¹⁸⁶ The college took the position that all chiropractic students must be able to see radiographic images—even though many chiropractors manage to practice successfully without reading radiographic images themselves.¹⁸⁷

177. See *supra* notes 165–68 and accompanying text.

178. See *supra* notes 174–75 and accompanying text.

179. See, e.g., Dudley Complaint, *supra* note 162, at ¶¶ 34–35.

180. See Dudley Intervention, *supra* note 13, at ¶ 1; see also Minh N. Vu, *Another DOJ Action over Allegedly Inaccessible Websites and Other Technologies, ADA Title III* (May 30, 2015, 5:30 PM), <http://www.adatitleiii.com/2015/05/another-doj-action-over-allegedly-inaccessible-websites-and-other-technologies/>.

181. See *Feds Ask to Join Blind Student's Lawsuit against Miami University*, WLWT (June 2, 2015, 7:10 PM), <http://www.wlwt.com/news/feds-ask-to-join-blind-students-lawsuit-against-miami-university/32999222> (reporting that “[Dudley] is not currently enrolled”).

182. See *Palmer Coll. of Chiropractic v. Davenport Civil Rights Comm'n*, 850 N.W.2d 326, 328–29 (Iowa 2014).

183. *Id.*

184. *Id.* at 329.

185. *Id.*

186. See *id.* at 331.

187. *Id.* at 345.

This case followed a process similar to the Ohio case against Case Western University Medical School, with a different outcome. Cannon filed a complaint with the Davenport Civil Rights Commission, a two-day hearing occurred, and the hearing officer found in Cannon's favor.¹⁸⁸ The commission adopted the hearing officer's proposed conclusion.¹⁸⁹ The university appealed to the state district court, which reversed.¹⁹⁰ The Iowa Supreme Court granted review and reversed again, remanding the case "with instructions to affirm the commission's order."¹⁹¹ The court emphasized the importance of engaging in an individualized inquiry rather than using a global policy to exclude all individuals with visual disabilities.¹⁹² Further, the court was able to cite extensive medical literature supporting the argument that students with visual impairments can participate successfully in medical schools without fundamentally altering the education they receive.¹⁹³ This decision reflects a changing attitude in the medical field about the ability of people with visual disabilities to be successful doctors.¹⁹⁴ Instead of requiring all students to observe through their own sensory capabilities, the medical field is opening up to the use of assistive devices.¹⁹⁵ Nonetheless, both Dudley and Cannon's cases suggest that some medical programs have not yet modified their programs to reflect this change in perception.

Over the course of several decades, other universities have stopped categorically denying admission to students because they are blind or deaf—but students still face barriers to an accessible medical education. Michael Argenyi's case reflects this problem.¹⁹⁶ Argenyi has a hearing impairment and relies on lip-reading, cued speech, Communication Access Real-Time Transcription (CART), and an FM system that sends sound waves directly

188. *Palmer Coll.*, 850 N.W.2d at 331.

189. *Id.* at 332.

190. *Id.*

191. *Id.* at 346.

192. *See id.* at 337 (quoting *Wong v. Regents of Univ. of Cal.*, 192 F.3d 807, 826 (9th Cir. 1999)).

193. *Id.* at 345 n.10.

194. *See id.*

195. *See Sarah M. Eickmeyer et al., North American Medical School's Experience with and Approaches to the Needs of Students with Physical and Sensory Disabilities*, 87 ACAD. MED. 567, 568–70 (2012).

196. *See Argenyi v. Creighton Univ.*, No. 8:09CV341, 2014 WL 1838980, at *1 (D. Neb. May 8, 2014); *see also Argenyi v. Creighton Univ.*, 703 F.3d 441, 445 (8th Cir. 2013).

to his cochlear implants to communicate.¹⁹⁷ Argenyi's journey to an accessible medical education was long but resulted in some success.

Argenyi requested that the university provide him with CART during his classes and an interpreter to assist him with his clinical work.¹⁹⁸ The university said it "would provide him with an FM system for lectures, small groups, and labs" but not the other accommodations he requested.¹⁹⁹ Because he could not understand the lectures with only the FM system, he paid for CART and interpreters himself.²⁰⁰ In July 2011, the district court granted summary judgment to the university, finding that Argenyi's requested accommodations were not "necessary" and that the university had provided "effective communication"—even though Argenyi's expert testified "that Argenyi had only 38 percent speech perception," and the FM system did not provide any significant benefit.²⁰¹ The Eighth Circuit reversed, finding "that the evidence . . . created a genuine issue of material fact as to whether [the university] denied Argenyi an equal opportunity to gain the same benefit from medical school as his nondisabled peers by refusing to provide his requested accommodations."²⁰²

On remand, a jury returned a verdict in favor of Argenyi, and the issues of "declaratory, equitable, and injunctive relief" went to the judge.²⁰³ The district court required the university to provide Argenyi with the requested auxiliary aids and services,²⁰⁴ but denied his request for reimbursement for the cost of the CART and interpreter services that he purchased in the first two years of medical school.²⁰⁵ The court ordered the university to pay \$478,372.42 in attorney's fees, expert fees, and costs.²⁰⁶ Thus, after a two-year leave of absence while this litigation took place, Argenyi was able to resume his studies with the required auxiliary aids and services.²⁰⁷

In many ways, Argenyi's case is different from that of medical school

197. *Argenyi*, 703 F.3d at 443–44.

198. *Id.* at 444.

199. *Id.*

200. *Id.* at 445.

201. *Id.* at 445–47.

202. *Id.* at 451.

203. *Argenyi v. Creighton Univ.*, No. 8:09CV341, 2014 WL 183890, at *1–2 (D. Neb. May 8, 2014).

204. *Id.* at *2.

205. *See id.*

206. *Id.* at *9.

207. *See id.* at *1–2.

students who are blind, because university software was not preventing him from pursuing his education. Instead, he was trying to persuade the university to acquire new technology that would allow him to pursue his education.²⁰⁸ Nonetheless, Argenyi's case is similar to that of Dudley and Cannon in that he wanted the university to spend some of its technology budget on providing services to students with disabilities. Rather than make those expenditures, the university paid large sums in attorney fees to its own lawyers (and, eventually, that of the plaintiff) in order to avoid making those technological modifications.²⁰⁹ The university was willing to provide access to an FM system, but that technology was of no assistance to Argenyi.²¹⁰ Its choice of assistance therefore did not include consideration of the actual needs of Argenyi, an individual with a disability.²¹¹ Like Pushkin, he was subjected to policies created on a general, theoretical level rather than accommodations that would be effective for him.²¹²

IV. STATUTORY AND REGULATORY SOLUTIONS

A modest statutory solution for a piece of this problem has been proposed in the Technology, Equality and Accessibility in College and Higher Education Act, known as the TEACH Act.²¹³ It would instruct the Access Board to develop accessibility guidelines for "electronic instructional materials and related information technologies in institutions of higher education," within 18 months of the passage of the Act.²¹⁴ The TEACH Act would require the Access Board to review these guidelines every three years "to reflect technological advances or changes in electronic instructional materials and related information technologies."²¹⁵

This statutory "solution," which is opposed by the American Council on Education,²¹⁶ does not do enough. If passed, the new regulations would

208. See *Argenyi v. Creighton Univ.*, 703 F.3d 441, 443–45 (8th Cir. 2013).

209. See *id.*; cf. *Palmer Coll. of Chiropractic v. Davenport Civil Rights Comm'n*, 850 N.W.2d 326, 328–32 (Iowa 2014); *Dudley Complaint*, *supra* note 162, at ¶¶ 1–13, 22–99.

210. *Argenyi*, 703 F.3d at 444–45.

211. See *Argenyi*, 2014 WL 1838980, at *1.

212. See *Argenyi*, 703 F.3d at 444–45; cf. *Pushkin v. Regents of the Univ. of Colo.*, 658 F.2d 1372, 1391 (10th Cir. 1981).

213. Technology, Equality and Accessibility in College and Higher Education Act, H.R. 3505, 113th Cong. (2013).

214. *Id.* § 2(a).

215. *Id.* § 2(c).

216. See Decarr, *supra* note 9 ("Far from creating helpful, voluntary guidelines, the

not go into effect for another 18 months and would only cover “electronic instructional material” and “related information technologies.”²¹⁷ It is not clear if “electronic instructional material” covers instructors’ use of web-page programs for live chat, turning in assignments, or posting notes.²¹⁸ Instructional materials could be limited to books and other assigned reading although the technology platform for disseminating those materials must be accessible.

One could argue that regulatory and statutory changes are not even needed. The ADA’s requirement that new construction be accessible unless it is structurally impracticable should address the problems discussed in Part III of this Article.²¹⁹ When entities make software decisions, they should be bound by the new construction or substantial renovation requirements in the ADA and consider accessibility as a core component of their purchasing decisions.²²⁰ Just as entities require architects to meet accessibility standards, entities should require software companies to rent, license, or sell accessible software.²²¹ If they did, expensive retrofitting would be unnecessary.

The Office of Civil Rights at the United States Department of Education (OCR) took that position as early as 1996.²²² In an enforcement letter to San Jose State regarding lack of access for students who are visually impaired, OCR said:

[F]rom the date of the enactment of Title II onwards, when making purchases and when designing its resources, a public entity is expected to take into account its legal obligation to provide communication to

TEACH Act would keep schools from using new technology to aid students, including those with disabilities. It would overturn existing legal standards and put an obscure federal agency in charge of approving use by campuses of new technologies—effectively blocking technological progress.” (quoting Barnes & Thornburg, LLP, *Analysis of the 2014 TEACH Act*, ACE (Sept. 16, 2014), <http://www.acenet.edu/news-room/Pages/Analysis-of-the-2014-TEACH-Act.aspx>) (internal quotation marks omitted)).

217. See H.R. 3505 §§ (2)(a), (6)(6)(A).

218. See *id.* §§ (6)(5), (6)(6)(B) (defining those terms).

219. See 28 C.F.R. § 35.151(a) (2014).

220. See *id.*; see generally Sally S. Scott et al., *Universal Design for Instruction: A New Paradigm for Adult Instruction in Postsecondary Education*, 24 REMEDIAL & SPECIAL EDUC. 369 (2003) (discussing the need for a “Universal Design” approach to postsecondary education to account for the accommodations of disabled students).

221. 28 C.F.R. § 35.150(b)(1).

222. Letter from Adriana Cardenes, Team Leader, Region IX, OCR, United States Department of Education, to Dr. James Rosser, President, California State University (Apr. 7, 1997, Docket No. 09-97-2002) (on file with author).

persons with disabilities that is ‘as effective as’ communication provided to nondisabled persons. At a minimum, a public entity has a duty to solve barriers to information access that the public entity’s purchasing choices create When a public institution selects software programs and/or hardware equipment that are not adaptable for access by persons with disabilities, the subsequent substantial expense of providing access is not generally regarded as an undue burden when such cost could have been significantly reduced by considering the issue of accessibility at the time of the initial selection.²²³

If public entities had followed that advice in 1996, there would be far fewer accessibility issues today.

The Ninth Circuit recently took a position consistent with this approach. In *Fortune v. City of Lomita*, the court noted that the ADA “impose[s] general accessibility requirements on public entities even in the absence of technical specifications for a particular facility.”²²⁴ Thus, it found that ADA regulations “require that all public on-street parking facilities constructed or altered after the ADA’s effective date be accessible”²²⁵ even though the ADA accessibility standards contain no technical requirements for the design of on-street parking.²²⁶

One might argue that, even with this broad interpretation of the ADA, software decisions need not be included in an entity’s accessibility obligations. Nonetheless, for public entities, the Ninth Circuit has ruled that, the term “services, programs, or activities” as used in the ADA brings “within its scope anything a public entity does.”²²⁷ Title III has similarly broad language in requiring nondiscrimination in the “goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation.”²²⁸ Further, like Title II, it requires new construction to be “readily accessible to and usable by individuals with disabilities.”²²⁹ New construction is not usable to individuals with visual impairments if accessibility is not a key component of software decisions.²³⁰

223. *Id.*

224. *Fortune v. City of Lomita*, 766 F.3d 1098, 1105 (9th Cir. 2014).

225. *Id.* at 1103.

226. *See id.* at 1102–03.

227. *Barden v. City of Sacramento*, 292 F.3d 1073, 1076 (9th Cir. 2002) (quoting *Lee v. City of L.A.*, 250 F.3d 668, 691 (9th Cir. 2001)) (internal quotation mark omitted).

228. 42 U.S.C. § 12182(a) (2012).

229. *Id.* § 12183(a)(1).

230. *Cf.* 29 U.S.C. § 794d(a)(6)(B).

Still, it would be useful if the DOJ would promulgate accessibility standards that applied to all software decisions and did not wait for further statutory authorization such as the TEACH Act. Bradley Areheart and Michael Stein argued passionately about the importance of accessibility standards governing public access to the Internet.²³¹ Although their recommendation is very important, it is not enough. The nonpublic aspects of technology need to be constructed, at the outset, in ways that are fully accessible to those with visual impairments or others who cannot read print. The purpose of the high accessibility standards in the new construction rules was to lower the cost of accommodations when entities hire individuals with disabilities.²³² Thus, a newly constructed warehouse may not be open to the public, but it is still governed by the ADA's highest accessibility standards.²³³ For example, it must have an accessible entrance so that it will be accessible to an individual who uses a wheelchair when that individual applies for employment.²³⁴ Because it is expected that the warehouse will eventually employ an individual who uses a wheelchair, the accessibility rules are part of its basic new construction obligation.²³⁵

Unfortunately, at this time, the DOJ does not seem to be moving in this direction. In its Advanced Notice of Proposed Rulemaking (ANPR), in considering revising Title II and Title III regulations to establish requirements for making the websites of covered entities accessible to individuals with disabilities, it contemplated "limitations on coverage" so regulations would only apply to the public goods offered by public accommodations and not to accessibility decisions made by all commercial facilities when they were built or substantially modified.²³⁶ These proposed regulations may not even keep pace with the structured settlements that have been reached with respect to the accessibility of technology.²³⁷

231. Areheart & Stein, *supra* note 14, (manuscript at 2–3).

232. See 28 C.F.R. § 36.101 (2014).

233. See *supra* notes 38–40 and accompanying text.

234. See 28 C.F.R. § 36.304(c)(1).

235. See *id.*

236. See Nondiscrimination on the Basis of Disability: Accessibility of Web Information and Service of State and Local Government Entities and Public Accommodations, 75 Fed. Reg. 43,460, 43,460, 43,465–66 (July 26, 2010) (to be codified at 28 C.F.R. pts. 35–36).

237. See, e.g., Consent Decree between Anthony Lanzilotti, Mitchell Cossaboon and National Federation of the Blind, and Atlantic Cape Community College (June 1, 2015)(on file with author)(requiring all electronic technology that is "purchased or licensed for, or deployed to students or prospective students is Accessible to those who

In order to move forward, public and private entities covered by the ADA need to expect that they will hire individuals with a disability that may preclude them from reading print. Employers should make all software decisions under the assumption that such an individual will need to access their software. If that expectation became the norm, software companies would begin to make accessibility a priority when designing software. It would no longer be necessary to sue Amazon for producing an inaccessible Kindle or to sue universities who acquire Kindles for their students without realizing they have made an inaccessible decision. Universities and others should make software accessibility a standard part of all of their contracts so that these issues are handled at the outset.

A positive sign in this direction is a recent settlement between the United States Department of Education and the Los Angeles Unified School District. As part of a settlement between the school district and the Department of Education—on behalf an employee with a visual impairment—the school district agreed to adopt standard language “in the District’s software contracts to ensure that those with whom the District is contracting are developing and creating items that meet the accessibility standards of Section 504, Title II, and their implementing regulations.”²³⁸ This seemingly small step could have a large, proactive impact by making accessibility a standard part of information technology decisions, rather than a modification that must be made on a retrofitting basis.

Rather than move in that direction, we are in the Wild Wild West, where entities make dozens of information technology decisions on a monthly or annual basis but rarely consider accessibility as part of that decision-making process. Students and employees can lose disability access as these decisions are made. A lack of technological access is a solvable problem, but only if it is made a priority. So far, the silence in the ADA accessibility guidance indicates a lack of priority. That needs to change.

are blind or visually impaired, unless its acquisition results in undue financial and administrative burdens or a fundamental alteration in a program, service or offering.”).

238. Letter from Arthur Zeidman, to Julie Hall-Panameño (Sept. 27, 2013) (on file with author).