

Disability Rights and Access to the Digital World: An Advocate's Analysis of an Emerging Field

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The typical federal disability rights case involves a disabled worker in a dispute over reasonable accommodations or a disabled patron claiming that there is a physical barrier to access to a public accommodation or government facility. While those types of matters are an important part of carrying out the promise of the Americans with Disabilities Act (ADA) and other disability rights laws, access to digital technology is emerging as a new frontier in the enforcement of civil rights for persons with disabilities. In these cases, the analysis turns not on accommodations or architectural guidelines, but whether the person with a disability has equal access to a program or activity which, in the digital world, often centers on the need for effective communication.¹

Unlike print, which can only be accessed visually, or sound, which can only be accessed aurally, digital information is simply electronic code that can be rendered audibly, visually, or tactilely. We listen to digital music and we read digital text on the Internet, and both are composed of digital code. The information on a compact disc could with equal ease be represented as notes on a page or the Internet text as audible words. For those who can neither hear nor see, digital textual information can even be presented as braille on a device called a refreshable braille display. Electronic tactile graphs cannot be too far away.

The core assistive technologies for persons with sensory disabilities—text to speech conversion, initially in the form of DEC Talks hardware and later as simple software programs, and captioning for those who cannot access audible information aurally—predate by many years the Internet and the explosion of digital devices, such as ATMs, electronic voting machines, and mobile phones. For example, in the 1970s, shortly after the development of individual computer terminals, the blind began using technology developed by IBM to gain audible access to information presented visually on a computer screen. That same decade saw the invention by Ray Kurzweil of a reading machine for the blind that, using flatbed scanners and Optical Character Recognition Software, converted and vocalized printed texts. By the late 1980s, a blind computer engineer named George Kerscher created the first commercial e-book for the blind. He chose not to patent his innovations in the hope that e-books would become appealing to those without print disabilities and thus make a bonanza of information available to the blind. Voice command technology for those with impairments that prevent them from using a keyboard or a mouse

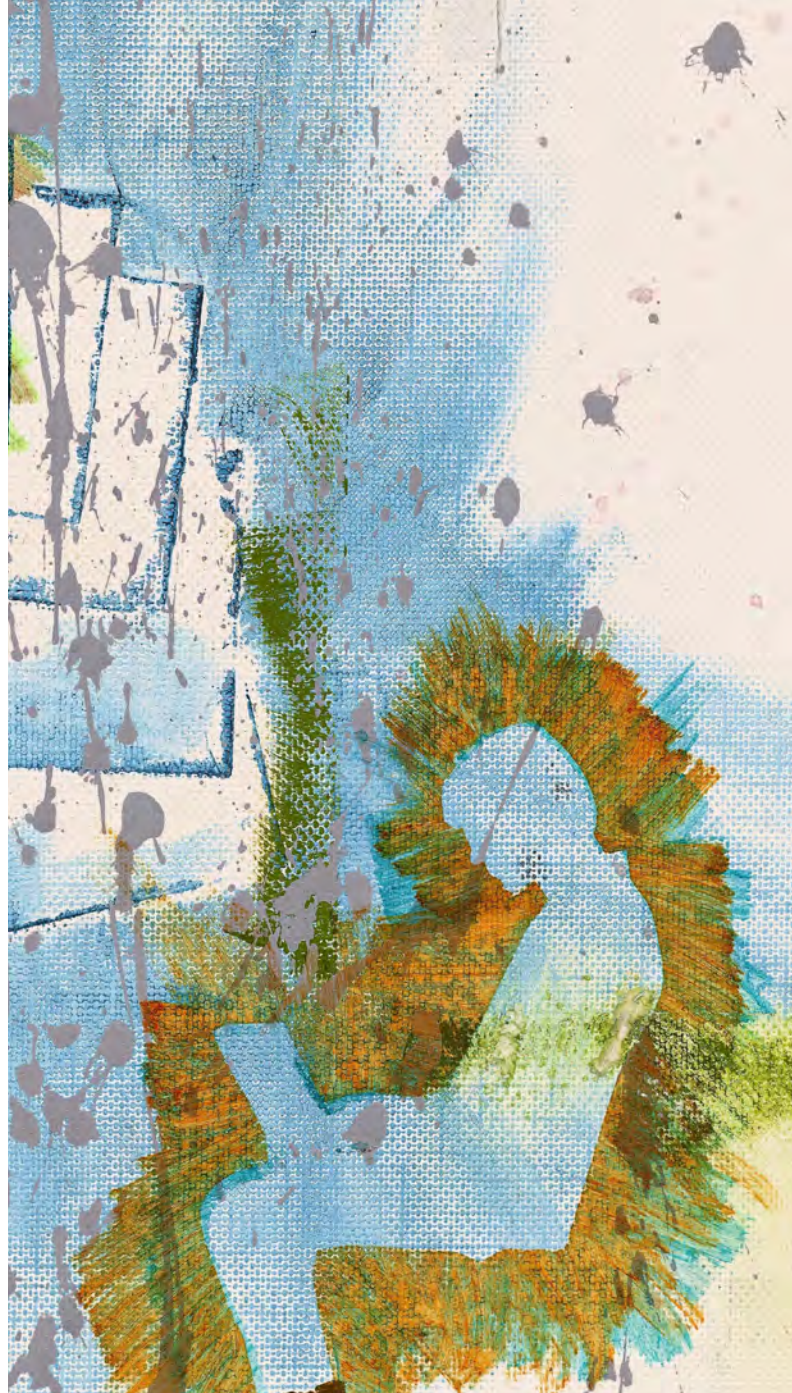
has also been around for a while. By 1998, the World Wide Web Consortium issued the first guidelines for ensuring that websites are accessible to all persons with disabilities and, in 2000, the U.S. Access Board established the standards for the accessibility of government websites.²

It was after most of those adaptive technologies were developed that we witnessed an explosion of digital devices, software, and content in government, business, education, and social life. How quickly we have all come to take for granted mobile phones, the availability of government information online, online classes, ATMs, airline kiosks, and social networking, to name but a few technological developments. Because mainstream access was feasible for all of these technologies when developed, the digital revolution should have been a powerful engine for integration of people with disabilities through equal access to these enhancements of modern life.

Unfortunately, only recently have developers of these technologies begun to recognize the benefits of and need for universal design of these technologies to permit access by people with disabilities. As a result, the widespread adoption of inaccessible technology has deepened the segregation of many people with disabilities. Consider this homely example: until the 1990s a blind person could independently and with ease cook, do laundry, and set a comfortable temperature in his own house. Since that time, however, a blind person buying a new house or appliances will find that the knobs and dials are gone, and with them, their ability to do these everyday tasks. In the workplace, the adoption of new software that was not designed or developed with the thought of having it interface with, say, screen reader software, often means that blind people cannot perform all the functions of their job and result in the employer unnecessarily having to expend money for human readers or other accommodations that could have been avoided if the software had been properly designed.

The Emergence of “Digital Disability Rights”

Laws like the ADA (enacted on July 26, 1990) pre-dated the digital revolution. The Internet was not used commercially until the mid-1990s. Self-service, touch-screen airline kiosks came into mainstream use around the same time. Portable e-books, as we know them, only began supplanting print books in the past several years. Because the 101st Congress knew that it could not predict all of the



technological developments that would come after enactment of the ADA, it passed a broad-reaching law with a simple mandate that could be applied to an evolving world: full and equal enjoyment of benefits and services for all, bounded, variously, by considerations of undue burdensomeness, infeasibility, and fundamental alteration. Indeed, during its deliberation of the ADA, the House Committee on Education and Labor stated that “the Committee intends that the types 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.”³ The Department of Justice also interprets the ADA to require consideration of new technology.⁴

Other laws also address the accessibility of technology. Some, like Section 508 of the Rehabilitation Act (29 U.S.C. § 794d) and the Twenty-First Century Communications and Video Accessibility Act (47 U.S.C. § 613), are specifically directed at the issue of making technology accessible to

people with disabilities. There are also traditional state anti-discrimination laws that have been interpreted to keep pace with changes in technology and the realities of modern life.

This body of law makes up what can be commonly described as our “digital disability rights.” The gist of the law is this: the flexibility of digital information should end the separate and unequal treatment of persons with disabilities and give them the same opportunities as their nondisabled peers.

Understanding the “Digital” in Digital Disability Rights

Computer science is built on binary code (the 1s and 0s representing “on” and “off,” respectively). This numerical code is, by definition, digital information. Because humans cannot meaningfully interpret the endless strings of 1s and 0s, we all rely on technology to do that for us. How we ask for that information to be presented depends on our circumstances. Digital information is inherently flexible, so it can be rendered in nearly any format our imaginations permit, such as audio, text, graphics, and movement.

With this understanding, it is easier to see that there is nothing special about presenting digital information in a manner best suited for a person with a particular disability. In the digital realm, we all need “adaptive” measures. By analogy, consider this thoughtful explanation from the U.S. Forest Service in the context of skiing:

Skiing is an adaptive sport, using skis, snowboards, with bindings for special boots, and poles for balance. Skiers require specialized equipment to participate in this sport. All skiers use adaptive equipment in order to negotiate from the top of the ski hill to the bottom. Skiers with disabilities also often require specialized equipment. Although the equipment might appear different from what you are used to, it serves the same purpose.⁵

And that’s the real point behind digital disability rights. The common goal is to be able to access digital information and the only difference is which method we use to obtain it. A properly coded website allows a sighted person to enjoy the text and graphics as he clicks through the site. A person with a visual disability uses screen access software to interact with the same website using keyboard commands. That software presents the information from the website in any number of formats: (1) synthetic speech, which reads aloud the code “behind the screen,” (2) braille, which is provided to the user on a refreshable peripheral device next to the keyboard, or (3) a magnified image of the screen.

But, screen access software and other “access technology” tools cannot do the job alone; they rely on the digital information provider to code the website, e-book, or software in a way that allows the access technology to find and present the information. Though a user with a visual disability cannot “see” a website image, the user can understand a textual description of the image (known in coding-speak as an “alt-tag”) that is “read” to the user. When alt-tags are left out of the coding of a clothier’s website, let’s say, a user with a visual disability is forced to guess at the meaning of the image file’s name (often an indecipherable series of

letters and numbers) that is read to the user, instead of the more helpful alt-tag of “men’s red sweater.” The next time you visit a website, place your mouse over an image for a few moments. If the image has the required alt-tag, a small box will appear with the text description of that image.

The good news is that building accessibility into digital devices from the outset is nearly always readily achievable. Both the technology and know-how exist. For websites, there are well-recognized accessibility coding standards such as the World Wide Web Consortium’s comprehensive, cross-disability standard known as Web Content Accessibility Guidelines 2.0 (WCAG 2.0), which is available online at www.w3.org/TR/WCAG, and the previously mentioned equivalent for federal agencies contained in the regulations implementing Section 508. Some technology developers offer to application developers coding guidelines for mobile devices or e-readers in the Application Programming Interface (API). The e-device giant, Apple Inc. has an iOS developer library that includes material that helps application developers make their “apps” accessible to users with visual disabilities.⁶ Google Inc. has been improving the accessibility features of its once thoroughly inaccessible Android operating system platform and also makes available APIs and other tools for making Android apps accessible to users with visual disabilities.⁷ Similarly, Microsoft Corporation makes available APIs and guidelines for making apps accessible on its Windows 8 platform.⁸ Both hardware and software have been developed to make ATMs and other self-service kiosks accessible. Accessibility, therefore, is usually just a matter of using the tools and knowledge that already exist.

Unfortunately, while accessibility is a marginal expense when it is incorporated early in the development of any device or service that uses digital information, retrofitting is not always inexpensive, quick, or easy. Failing to build accessibility into a device, software program, or mobile app can be like completing the construction of a 30-story building and then realizing that an elevator would have been a good idea.

The elevator analogy, which concerns a device equally useful for those with and without mobility impairments, also illustrates the truth that designing for accessibility tends to be good for everyone. Designing for accessibility is known as the principle of universal design. For example, with the installation of wheelchair ramps in transportation facilities, we saw the development of suitcases with wheels—a boon for all. The scanner technology and optical character recognition software that Ray Kurzweil invented for the blind benefits us daily. Devices made accessible with such technology can thereafter be used by everyone in “eyes free” or “hands free” modes. Generally speaking, an accessible website is organized better, has fewer bugs, and is optimized for search engines. The result of incorporating accessibility into technology is that

1. the user with a disability gets access to all of the same information or services with substantially equivalent ease of use,
2. the user with no disability has an enhanced ease of use without noticing it, and
3. the information or service provider gets a greater audience and a product that is easier to maintain.

Having accessibility is not inconsistent with deploying state-of-the-art techniques that make digital technology attractive and exciting. You need not look any further for an illustration than Apple’s products. The Apple iPhone 3GS and subsequent generations of the iPhone have been accessible, right out of the box, to blind users. Other Apple iOS devices have followed suit and are all equipped with built-in text-to-speech software known as VoiceOver. Dynamic and complex retail websites like Newegg.com have been consistently accessible to the blind. The slick features of Microsoft’s Windows 8 are not hampered by its accessibility. Using the proper techniques, programmers can make their information just as accessible as it is exciting and innovative. Some forward-looking companies have built access into their corporate culture—helping their institutional customers to thereby avoid liability for not being accessible.

The Vindication of Digital Disability Rights

The opening shot, in terms of litigation, came in late 1999 when the National Federation of the Blind (NFB) sued America Online Inc. in federal court in Massachusetts to make its internet services accessible.⁹ Under the First Circuit’s decision in *Carparts Distribution Center Inc. v. Automobile Wholesaler’s Association of New England Inc.*, 37 F.3d 12 (1994), a “place” of public accommodation covered by Title III of the ADA need not be a physical place. The America Online case was amicably resolved in a matter of months: America Online committed to making accessible its then upcoming version of its Internet software (AOL 6.0) and adopting policies to make its content accessible.¹⁰ Similarly, the first lawsuits to make ATMs accessible through voice guidance, filed against Diebold Inc. and Chevy Chase Bank of Maryland, both in 2000, were quickly resolved in favor of accessibility and, in the case of Diebold Inc., included an agreement to develop technology jointly with the NFB.¹¹ In the 2002 decision of *Martin v. Metropolitan Atlanta Rapid Transit Authority*, 225 F. Supp. 2d 1362, 1377 (N.D. Ga.), the district court held that a governmental entity’s website had to be accessible to people with disabilities.

The next significant development came in *National Federation of the Blind v. Target Corp.*, 452 F. Supp. 2d 946 (N.D. Cal. 2006). There, the class plaintiffs sued Target under the ADA and two California civil rights laws alleging that Target’s website was inaccessible to users with visual disabilities. Target argued that the laws did not apply to its website because the website was not a physical place of public accommodation. The district court rejected Target’s defense, finding that there was a nexus between portions of Target’s website and its brick-and-mortar stores that obligated Target to make those portions of its website accessible. Ultimately, the parties settled the matter for \$6 million in damages for the state law causes of action and established a process for ensuring that the website would become, and remain, accessible.¹²

The law has continued to develop. In *National Association of the Deaf v. Netflix Inc.*, No. 11–CV–30168, 2012 WL 2343666 (D. Mass. June 19, 2012), the plaintiffs sued Netflix under the ADA because no closed-captioning was available for the majority of movies on the company’s “Watch Instantly”

online video service and other features were not usable by hearing-impaired patrons. Netflix unsuccessfully sought to dismiss the case. The court reasoned that, under First Circuit law, the video service need not have a corresponding physical location to be considered a public accommodation under the ADA. This ruling is significant as the first judicial recognition that Internet-only businesses are obligated under the ADA to make their websites accessible. The parties have since reached a settlement that, pending court approval, will require Netflix to close caption all of its inventory in the next two years and require Netflix to reimburse the plaintiffs' attorneys' fees in the amount of \$755,000.¹³

Many technology developers, however, do not appear to be public accommodations under the ADA or may not receive federal funds under Section 504 of the Rehabilitation Act of 1973. To persuade these technology developers to change their ways, disability advocacy organizations have either sued or filed complaints with the Departments of Justice or Education against governmental entities, educational institutions, or others who purchase from these developers and who must offer equal access to their programs and activities. When these markets insist on accessibility as a condition of doing business, the developers will focus on accessibility.

The first effort to ensure that the markets insist on accessibility came when the Reading Rights Coalition, an organization of nonprofits representing those who cannot readily access print (e.g., the blind, those with cerebral palsy, dyslexia, and upper spinal cord injuries) successfully resolved complaints filed with the Departments of Justice and Education against universities that had purchased inaccessible Kindles for the classroom. The settlement of the complaint required the respondent universities to no longer purchase any inaccessible e-book readers.¹⁴ In the wake of those settlements, these two federal departments issued a letter to all college presidents and universities that advised that schools that acquire, recommend, or use technologies that exclude an entire class of persons based on their disability are violating the ADA and the Rehabilitation Act.¹⁵ A recent agreement with Penn State University resolving a complaint filed with the Department of Education commits Penn State to make accessible the millions of pages on its 8,000 websites. The agreement also mandates that all educational software, including learning management and library search software be accessible and that Penn State follow an accessibility-only purchasing policy.¹⁶ A lawsuit against Florida State University went one step further, requiring that digital course content in the math and sciences be accessible.¹⁷

Access to e-books has also been the subject of recent litigation. In 2005, a group of libraries and universities began to work with Google Inc. to digitize their library collections. In 2008, the University of Michigan made the more than 9 million digital books in its collection available to students, faculty, and staff who had documented print disabilities.¹⁸ However, in late 2011, the Author's Guild and a number of individual authors sued a number of universities whose collections had been digitized by Google, alleging copyright infringement and seeking impoundment of all the digital scans. *The Author's Guild Inc. v. HathiTrust*, No. 11-cv-6351 (S.D.N.Y.). The National Federation of the Blind and several

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blind scholars intervened as defendants in the litigation to argue that the new access to these digital books is nothing more than fair use and is also permitted under the Chafee Amendment to the Copyright Act. On Oct. 10, 2012, the court held that a university, in discharging its ADA obligations, may digitize its library as a fair use under copyright law because it is a "transformative use."¹⁹ This means that students with disabilities will, for the first time, have the same opportunity to conduct research on an equal footing with their peers. These students will be allowed to peruse at will the table of contents and indices and skim pages to determine if a particular book is pertinent and then, if it is, to read it on demand, just like a sighted scholar. The court also held that because equal access is a primary mission of universities under the ADA, universities can be an "authorized entity" under the Chafee Amendment to the Copyright Act who, as such, can make their digital collections available to *all* blind persons in the United States who document their visual disability.

Governmental entities have been undertaking enforcement efforts as well. In a recent settlement with the town of Warrenton, Va., the Department of Justice included a requirement that the town's website be accessible.²⁰ The Massachusetts Attorney General, together with the National Federation of the Blind, entered into a settlement, predicated on Massachusetts state law, with Apple to make iTunesU accessible to the blind,²¹ a development that may have spurred Apple's subsequent full embrace of accessibility. The Massachusetts Attorney General also participated in litigation against Cardtronics Inc., the largest nonbank deployer of ATMs in the world, to make its own and merchant-owned ATMs accessible with voice guidance.²² The New York attorney general entered into settlements with Priceline and Ramada Inns to make their websites accessible.²³

As of this writing, though, the number of disability rights cases involving barriers to digital technology and content has been relatively few, but there are several developments that may signal an increase in such litigation. Pending with the U.S. Office of Management and Budget are the Department of Justice's proposed new regulations under Title III of the ADA. Those regulations are unequivocal that websites are places of public accommodations under Title III. If those regulations are promulgated, it is likely that the Civil Rights Division of the Department of Justice will begin to bring actions against companies whose websites are inaccessible and advocacy groups will certainly seek decisions

in those circuits that had held that under Title III public accommodations must be “physical places.”

Two attention getters for federal practitioners will be: (1) the long-anticipated report by the Department of Justice regarding the federal government’s compliance with Section 508 of the Rehabilitation Act, and (2) the “refresh” of Section 508’s substantive standards. Section 508 requires that the technology that the government buys or develops be accessible. In 2000, the Access Board developed substantive standards to measure compliance with Section 508 and has had a proposed “refresh” of those standards, which take a functional rather than prescriptive approach, pending for some time before OMB.²⁴

While many federal agencies and practitioners are awaiting this refresh, we do know that it is a law that is largely honored only in the breach. Section 508 requires the Department of Justice to issue biennial reports, beginning in 2001, of federal agencies’ compliance with the accessibility requirements of the statute. The first report was duly issued in 2001 and documented some chronic accessibility problems. In 2004, DOJ conducted another survey but never released the results. In 2010, Justice conducted another survey that was scheduled to be released in 2011. That report was released on Sept. 12, 2012, and documented both success and failure in accessibility.²⁵ Of note, approximately 20% of federal agencies admit that they have accessibility barriers on their websites and a significant number of agencies are not using procurement processes required to comply with Section 508.

Independent reviews of Section 508 compliance paint a more grim picture. In 2011, an extensive study by Dr. Jonathan Lazar at Towson University found that only 4 out of 100 sampled federal government websites were free of Section 508 violations.²⁶ The study also found that nearly half of the websites that specifically claimed to comply with Section 508 had at least one basic accessibility barrier that violated Section 508. If the 508 “refresh” is promulgated, it is likely that the disability community will begin filing rafts of administrative complaints. On the other hand, if the government creates a market in accessible technology by its purchases, this will have a transformative effect on what is available to commercial purchasers. Thus, there is a great opportunity for the advancement of accessibility well beyond the bounds of government.

Another area likely to see further litigation relates to the accessibility of government notifications. As baby boomers reach retirement and develop age-related disabilities or wounded veterans return from campaigns abroad, disability advocates will be focusing more on this issue, especially with the Department of Education, which administers tuition loans; the Centers for Medicare and Medicaid Services; the Department of Housing and Urban Development; and the Department of Veterans Affairs. These agencies will need to assess their practices for providing notices and information in a manner that is accessible to persons with disabilities. Moreover, accessibility will be critical to fully satisfying the President’s May 23, 2012, directive to all executive agencies to make two key government services available on mobile phones within 12 months.²⁷

How to Ensure Digital Disability Rights Are Observed

Okay, so you get it: digital information needs to be accessible. Now what? The first step should be to see where your company, agency, or client stands with respect to the accessibility of its digital information. For websites, there are very helpful (and free) automated tools that can give you an idea of whether there are barriers on the website. Automated tools, however, can only take you so far. An image with an alt-tag reading “Click Here” or “Picture” will show as a pass. However, user testing, preferably by users of assistive technology, is critical. This testing can also be supplemented by private consultants who specialize in evaluating websites and other digital applications.

Putting warranties and indemnities into your purchasing contracts can help ensure that you do not buy new problems. If the technology developer contracts with the government, it will have VPATs (Voluntary Product Accessibility Templates) that it can share. Testing for accessibility when you test the product for other criteria will help avoid error.

Doing a self-audit of the accessibility of one’s technology, much like the architectural audit of physical barriers undertaken by many institutions in the early 1990s, will allow you to get a handle on the size of the problem. And then when you know the scope of the problem, come up with a timetable that is fiscally reasonable and achievable. Again, there are standards, APIs, and other developer tools to guide digital information providers through the process of fixing barriers to accessibility. Consultants are also available to supplement the knowledge and abilities of in-house developers.

And once the digital information is accessible, steps must be taken to keep it that way. Personnel who create and develop the presentation of digital information should be given clear guidelines on how to do that in an accessible manner. These personnel should be given regular, periodic training, especially when they are first brought on board. Keeping a dynamic website accessible, however, also requires training those who code to your website so that inaccessible material does not replace accessible content. Some agencies, like the U.S. Food and Drug Administration, have had success by making the right to post to the website dependent on doing so accessibly. The testing discussed earlier should become a routine, periodic event and accessibility audits should be conducted to spot-check for issues.

A critical component of systemic accessibility is for high-level leaders to make accessibility a priority. Part of what has allowed companies like IBM to be exemplars in the realm of accessibility is the instillation of a culture of accessibility. In 1999, IBM instituted Corporate Instruction 162, which mandated that the company assess the accessibility of all new products before release and integrated accessibility into the design process.²⁸ Without that culture and commitment by leadership, even a well-designed accessibility plan will become a dead letter and any gains in accessibility will be lost. And that lost opportunity helps no one.

Finally, and most important, reach out to disability consumer organizations. Acknowledging that you have accessibility barriers will not buy you a lawsuit—the barriers are probably no secret and you create goodwill by announcing that you recognize the problem and want assistance in fix-

ing it. In doing so, you should expect a response that allows you to approach the issue in a fiscally sensible fashion. If disability advocates can point to your client and say that the client has removed its barriers to digital technology and content and is thriving, that can only make the advocate's job easier with the next entity ... and the next. **TFL**

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Endnotes

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