



Response to

**United States Department of Justice
Advance Notice of Proposed Rulemaking
(RIN 1190-AA61, Docket No. 110)**

**Nondiscrimination on the Basis of Disability;
Accessibility of Web Information and Services of State and
Local Government Entities and Public Accommodations**

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Introduction

This response to the US Department of Justice's advance notice of proposed rulemaking on the accessibility of web information and services of state and local government entities and public accommodations is provided by Marco Maertens on behalf of Accessibility Associates, LLC.

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A. Accessibility standards to apply to websites of covered titles II and III entities

Question 1

Should the Department adopt the WCAG 2.0's "Level AA Success Criteria" as its standard for website accessibility for entities covered by titles II and III of the ADA? Is there any reason why the Department should consider adopting another success criteria level of the WCAG 2.0? Please explain your answer.

Response

Yes, the Department should adopt WCAG 2.0 Level AA.

- Level A success criteria are insufficient.
These criteria are very basic and do not provide an adequate level of accessibility for persons with disabilities. For instance, it does *not* include sufficient requirements for effective keyboard-only use or for such fundamental accommodations as minimum color contrast or that a page be functional when the text size is doubled. These requirements provide basic accessibility for persons with color blindness or low vision as a result, for example, of aging. Level A does not include these requirements. Such disabilities are relatively widespread, and the fact that Level A fails to sufficiently address these and several others makes it an unsuitable standard to adopt.
- Level AAA success criteria are not feasible.
As already acknowledged by the Department, even the WCAG documentation itself recommends against making Level AAA a requirement.
- Coming up with a customized requirement somewhere between Level A and Level AAA is ineffective.
Taking an *à la carte* approach to individual success criteria would second-guess the considerable effort and expertise the W3C WAI put in to establish these levels, and any other body is unlikely to do any better. In addition, such a move would only invite confusion by deviating from a widely established and accepted standard.
- Level AA criteria are widely accepted in the accessibility community as the appropriate level.
- Level AA success criteria are not excessively burdensome.
Implementing Level AA success criteria does not present a large additional effort compared with implementing those of Level A for newly created websites. This is not necessarily so for the retrofitting of existing sites, however. See the answer to Question 10 on the topic of a safe harbor on the issue of existing web content.
- The Level AA success criteria are widely adopted in regulation elsewhere.
Some of the US's major trading partners have adopted WCAG 2.0 Level AA or are in the process of doing so as internal government policy and, in some cases, for private industry as well. Among others taking these steps are the European

Union, the United Kingdom, France, the Canadian federal government, the Canadian provinces of Ontario and Québec, and Japan. Regulation inconsistent with this global consensus would sow confusion and would hurt rather than enhance American companies' competitive position in the global marketplace.

Question 2

Should the Department adopt the section 508 standards instead of the WCAG guidelines as its standard for website accessibility under titles II and III of the ADA? Is there a difference in compliance burdens and costs between the two standards? Please explain your answer.

Response

No, the Department should *not* adopt the *current* Section 508 standards instead of the WCAG guidelines.

- The current Section 508 is outdated.
The current Section 508 standards, which date from 2001, are showing their age. Developments in the web industry since then make these standards increasingly ill suited to modern web development. Some requirements, such as the one relating to server-side image maps, are all but meaningless since this technology is no longer used or necessary in modern web development. Moreover, more up-to-date techniques, such as interactive web applications are not addressed in these standards.
- The current Section 508 is not adaptive to changes in technology.
Unlike WCAG 2.0, the current Section 508 provisions are technology-centric and do not lend themselves to technological changes in the web industry. See the answer to Question 3 for a more detailed discussion of this issue.
- The current Section 508 is likely to be harmonized with WCAG 2.0
Even the Access Board, the body overseeing Section 508, is in the process of updating Section 508 with the express aim of harmonizing the standard with the WCAG 2.0 standards. However, this work is not complete and will not be for some time.

Yes, there are greater compliance burdens and costs associated with WCAG 2.0 compared with the current Section 508

- The current Section 508 is easier to comply with because it is out-of-date.
Because Section 508 is outdated and does not cover the full breadth of modern web development, as mentioned above, it is easier and less costly to comply with. It is also less effective at achieving its goal of making web content accessible to persons with disabilities. The lower costs of implementing Section 508 is not a sufficient justification for adopting this standard over the more burdensome, yet much better suited WCAG 2.0 standard.

However, if the *revised* Section 508, which covers the US federal government, harmonizes with WCAG 2.0 Level AA as is widely anticipated, the Department should seriously consider referencing the revised Section 508 explicitly rather than WCAG in

the interest of establishing a single standard for entities covered under Titles II and III of the ADA as well as the US federal government.

Question 3

How should the Department address the ongoing changes to WCAG and section 508 standards? Should covered entities be given the option to comply with the latest requirements?

Response

The WCAG standards are structured to take changes into consideration and the Department should defer to this structure in requiring compliance from covered entities.

- WCAG 2.0 standards are largely technology-neutral and focus on outcomes. The original Section 508 and WCAG 1.0 were quickly overtaken by changes in the web industry and became increasingly irrelevant. To avoid a similar fate, WCAG 2.0 was not only an update in terms of the content it addressed, but also in the way it addressed this content. WCAG 2.0 is focused on accessible *outcomes* for persons with disabilities, rather than the particular *techniques* to achieve those outcomes.
- WCAG 2.0 provides separate implementation guidance. Techniques to achieve the outcomes specified by WCAG 2.0 are updated separately. This allows the techniques to adapt more nimbly to changes in prevailing technology over time without having to revise the outcomes themselves.
- WCAG 2.0's approach is forward looking. By conforming to the WCAG 2.0 standards, covered entities will be ensuring outcomes and will be provided "Techniques" to continue doing so as new technologies become available.

Question 4

Given the ever-changing nature of many websites, should the Department adopt performance standards instead of any set of specific technical standards for website accessibility? Please explain your support for or opposition to this option. If you support performance standards, please provide specific information on how such performance standards should be framed.

Response

Yes, the Department should adopt performance standards rather than specific technical standards. The Department can do that by adopting WCAG 2.0.

- Performance standards maintain relevance longer. By adopting performance standards, rather than technical standards, the Department can reduce both the extent and frequency of which standards will have to be revised. Performance standards mean focusing on the ability of persons

with disabilities to use websites, regardless of the particular technology used to achieve this.

- WCAG 2.0 is structured around performance standards. Unlike WCAG 1.0 or the current Section 508 standards, WCAG 2.0 is written to be technology-neutral and focuses instead on desired outcomes, or performance standards, for persons with disabilities. As mentioned above, periodic “Techniques” are published providing guidance on how to technically meet these outcomes in pace with technological developments and innovations. The binding standards themselves do not change.

B. Coverage limitations

Question 5

The Department seeks specific feedback on the limitations for coverage that it is considering. Should the Department adopt any specific parameters regarding its proposed coverage limitations? How should the Department distinguish, in the context of an online marketplace, between informal or occasional trading, selling, or bartering of goods or services by private individuals and activities that are formal and more than occasional? Are there other areas or matters regarding which the Department should consider adopting additional coverage limitations? Please provide as much detail as possible in your response.

Response

The Department's proposed parameters as outlined in this section are largely sound and practical. However, elaboration and additional emphasis are warranted, especially in regard to content.

- Personal use should be excluded within sites of covered entities.
Web content created or posted for personal, noncommercial use should not be covered, *even if that content is posted on the website of a covered entity.*
- Covered entities should not be responsible for individuals' material.
Covered entities should *not* be liable for inaccessible content posted to their sites by individuals not under their control.
- It should be possible to make posts accessible.
Covered entities should ensure that their website users have the ability to make their posts or other online activity accessible *whether or not the users choose to make use of that ability.*
- Individual economic activity should not be covered.
Informal or occasional trading, selling, or bartering of goods or services by private individuals in the context of an online marketplace should not be covered.
- Legal status should distinguish individual economic activity.
Individual informal or occasional economic activity should be defined by acting in a private capacity rather than within the context of a legally established business entity, ranging from sole proprietorships to limited liability companies and corporations.
- Sites should not be liable for external linked content.
Covered entities should not be required to ensure the accessibility of websites that it links to or for sites that link to it, as long as the entity does not operate or control that other site. This should be so *whether or not the website informs users of this fact.*
- Covered entities should be liable for *required* third-party sites.
Sometimes a website requires users of its website to utilize another website in order to take part in its goods and services. For example, payment for items on

one website must be processed through another website. Another example is that access to parts of one website requires logging in or authentication on another website or service. To the extent that a covered entity *requires* this, it may be liable for the accessibility of other sites, *even if it does not operate or control those other sites*.

- Third-party material should not be covered.
A covered entity should not be responsible for the accessibility of products, services, *or content* sold or provided *when it does not create or control them*. For example, a site that sells books from various publishers should not be responsible for ensuring that a Braille version of a particular book is available. Even if a Braille version *is* available, the seller should not necessarily be required to stock it or sell it. However, the process of finding and buying the book using the website *should* be accessible. Similarly, a site offering streaming video of various Hollywood blockbusters should not be responsible for ensuring a subtitled version of a movie exists, but finding and streaming the movie through the website should be accessible.

C. Compliance issues

Question 6

What resources and services are available to public accommodations and public entities to make their websites accessible? What is the ability of covered entities to make their websites accessible with in-house staff? What technical assistance should the Department make available to public entities and public accommodations to assist them with complying with this rule?

Response

The services of accessibility specialists offer the most thorough and effective way for covered entities to make their websites. Hiring outside consultants may be the most cost-effective approach for many entities, however, it is also very feasible for new in-house staff to be hired or existing staff to be trained to ensure accessibility of websites.

In order to build out internal expertise, a wealth of specialized resources is available for information architects, web designers, developers, programmers, project managers, content specialists, and many more to help to make websites accessible and comply with whatever requirements are adopted. Many excellent resources are available free or very cheaply on the Web. Other services and resources are available at various costs. I identify four key specialized needs: accessibility services, training and learning, scanning software, and assistive technology for testing. What follows is a brief and far-from-exhaustive sampling of what is available.

Accessibility Services

Accessibility consultants and service providers, such as Accessibility Associates, can provide a range of services to covered entities including assessments, audits, training, remediation, and various other consulting services. Different providers target different size clients. They can bring their considerable expertise to provide a cost-effective solution to covered entities.

Training and Learning

- The World Wide Web Consortium, W3C, that maintains the WCAG 2.0 standard provides a wealth of resources on their website, though this material can be daunting both in its quantity and level of technical detail.
- The non-profit WebAIM.org provides many web accessibility resources providing information in an easy-to-understand and practical form.
- W3schools.com, not affiliated with the W3C, also provides information and self-directed tutorials online at no cost.
- The Access Board provides many resources to the public free-of-cost on complying with Section 508. Regardless of what particular standard is chosen for

the requirement, there are generally applicable principles and a fair amount of overlap that apply to the various standards.

- Several companies provide training both in-person or online. Many of these are quite affordable, such as the online training provided by Accessibility Associates.
- Finally, several texts are available from online retailers or brick-and-mortar stores in various formats that provide detailed instruction on how to make websites accessible and comply with regulatory requirements.

Scanning Software

Especially for large sites, it is key to automate some of the process of checking for compliance. Scanning software alone cannot effectively confirm conformance nor perform meaningful assessments or audits, but it is an invaluable tool in assisting with all of these activities. While there are a number of commercial and enterprise-level packages that are available, there are also professional grade products available free, although some of these are better suited for smaller-scale sites. These include the University of Urbana-Champaign's Functional Accessibility Evaluator (FAE), Deque's FireEyes, and HiSoftware's Cynthia Says.

Assistive Technology for Testing

Ideally, testing should involve persons with disabilities. However, when this is not feasible, it is crucial to carry out testing for accessibility with the actual assistive technology that persons with disabilities themselves use. While it is not realistic for most able-bodied testers to learn to use specialized assistive technologies such as a refreshable Braille display, it is very possible for them to learn to use a screen reader to approximate use by people with low vision or blindness. Screen readers are the most widely used assistive technology and several commercial products are available. The current market leader is Freedom Scientific's JAWS, which offers a free demonstration version which allows full use for 45 minutes at a time. An open-source free reader called NVDA is also available and gaining popularity. A freely available plug-in for the Firefox browser called Fangs simulates the spoken output of a screen reader as text output.

As for entities' ability to comply with in-house staff, as mentioned earlier in this answer, it is perfectly feasible for entities to do this. While web designers and developers conversant with Web Standards were once a small niche group of devoted professionals, today this is the basic skill set expected in any serious web development endeavor. It is to be expected that in the future, web accessibility will be a similarly basic part of a professional web designer's or developer's expertise. The resources mentioned under Training and Learning previously in this answer are a good place to start with this effort.

Various government departments and agencies provide resources on web accessibility that meet current Section 508 requirements. These are good starting point for entities that wish to conform to WCAG 2.0. As the revised Section 508 is harmonized with WCAG 2.0 the revised resources addressing that change will become even more

useful. The Department could catalogue some of the better resources already available and direct covered entities to them.

Question 7

Are there distinct or specialized features used on websites that render compliance with accessibility requirements difficult or impossible?

Response

Yes there are specialized features on some websites that can render compliance difficult or impossible. Some examples of these include certain kinds of games, music services, audio editing applications, drawing applications, and other features that specifically target particular senses such as hearing or sight. These can be impossible to make accessible for particular disabilities in any meaningful way, though innovations can lead to surprising solutions to some of these challenges once considered “impossible”.

Question 8

Given that most websites today provide significant amounts of services and information in a dynamic, evolving setting that would be difficult, if not impossible, to replicate through alternative, accessible means, to what extent can accessible alternatives still be provided? Might viable accessible alternatives still exist for simple, non-dynamic websites?

Response

Alternatives within a web context are feasible but should be used as a last resort only.

- Dynamic content has presented challenges.
While recent developments in dynamic interactivity of websites have presented web accessibility challenges, there is nothing in these challenges that are inherently unsolvable. Public and private bodies, including the W3C itself, have and continue to put in considerable work to overcome these challenges.
- Use of alternatives should be minimized.
An accessible alternative is occasionally necessary, but in the overwhelming majority of cases the “main” material can itself be made accessible without the need to provide an alternative. The possibility of an accessible alternative should only be acceptable if there is absolutely no other way to make it accessible.
- Alternatives are often ineffective.
Making a website, or even a part of it, accessible by providing an accessible alternative not only significantly increases the work on the part of the provider both to create and especially to maintain multiple versions of the same material on the site, but this technique often only addresses a single disability, typically blindness.
- Alternatives can lead to divergence.
In addition to the extra cost, maintaining alternatives can easily lead to a divergence of content and functionality between the “standard” version and the

alternative “accessible” one, raising the specter of separate but unequal access, despite the best intentions of all involved.

As for non-internet-based alternatives to provide accessibility, such as 24/7 telephone support, or paper-based materials delivered by mail, these can sometimes be helpful. However, overwhelmingly it is hard to provide a true alternative to the access, speed, flexibility, or quantity provided via the Internet. Such alternatives, aside from being a pale alternative, can often be more expensive provide and maintain, especially in the long run.

D. Effective date

Question 9

The Department seeks comment on the proposed time frames for compliance. Are the proposed effective dates for the regulations reasonable or should the Department adopt shorter or longer periods for compliance? Please provide as much detail as possible in support of your view.

Response

Yes, the proposed time frames are realistic and appropriate for the majority of cases. For some especially large projects, a total of a year, rather than six months might be more appropriate.

- Time frames are realistic for staff.
Existing staff can be trained in much less time and they can easily adapt their work within this time frame. If desired, new staff can easily be hired and integrated into an organization's workflow. Outside consultants can provide a quick and cost-effective way to meet requirements within the time frame.
- Typical processes can accommodate the time frame.
The overwhelming majority of the coding work involved with accessibility is done on the so-called "front end" or the "client side", typically using technologies like HTML, CSS, and JavaScript. For larger projects, this work is often done first and then sent to another group of programmers who develop the so-called "back end" or "server-side" code. Broadly speaking this second step involves implementing access to databases and encoding business rules and logic into the website. Technologies such as J2EE, .NET, or PHP are used at this stage. Despite that the accessibility-sensitive work is done first, in most cases, the proposed six months still allows projects in progress to incorporate new accessibility requirements into the work flow. Additionally, it is common for adjustments to be made to the front-end component of the work during or after the completion of the back-end component. Sometimes this is done in a back-and-forth manner. Accessibility accommodations can be introduced at this stage, too. For especially large projects, a total of one year may be required. Presumably such cases could be dealt with as exceptional circumstances under the rubric of undue burden.

Question 10

The Department seeks comment regarding whether such a requirement would cause some businesses to remove older material rather than change the content into an accessible format. Should the Department adopt a safe harbor for such content so long as it is not updated or modified?

Response

Yes, the department should adopt a safe harbor for older material.

- There is a huge body of existing older material. Anecdotal predictions of federal government websites “going dark,” or in other words, being taken offline, with the onset of Section 508’s enforcement period starting in 2001 happily proved to be unfounded. Nonetheless, given the sheer mass of pages already created by private companies since the widespread popularity of the Web began in the mid-1990s, it would be a huge undertaking and economically prohibitive to be required to retrofit all pages produced and still available since that time.
- Retrofitting is much more expensive. I recently completed an assessment for the e-commerce site of a large Fortune 500 company, which had already undertaken efforts to address accessibility on its site, though admittedly in a somewhat haphazard manner. Of the tens of thousands of pages that made up the site, 650 representative pages were evaluated for web accessibility. The project included recommendations for remediation, but no work to actually fix the problems. Over 60% of the pages examined had some kind of web accessibility problem. The client was taken aback at the extent of work involved in retrofitting its site. Six months later, even the most egregious defects had yet to be fixed.
- New material can be made accessible at relatively low cost. In my experience incorporating accessibility from the outset with qualified personnel can add 3-6% or less to technical development costs, for smaller projects of 50-300 pages. There are significant economies of scale such that larger sites could benefit from even significantly lower costs. Furthermore, technical development costs are only one set among many involved with building websites. Where efforts for accessibility are required in these other areas, they are comparatively trivial in terms of the hours required, making the portion that accessibility accounts in the total cost of creating a web site even smaller. This is not to say that all projects with all teams under all conditions will fall within this range. This is simply an example taken from my own experience and shows what is possible.
- Relative costs and efforts justify a safe harbor provision. Given the high costs of retrofitting material, and the much smaller, more manageable costs of incorporating web accessibility into new sites, the Department should provide a safe harbor exempting existing material from accessibility requirements. Doing otherwise would introduce a significant burden and would likely undermine support, acceptance, and the practicability of the requirements. On the other hand, the relative easy and low cost of requiring new material to be accessible will be a substantive move towards making accessibility the norm on the Web.
- Modified material should be covered. Safe harbor provisions notwithstanding, pages and other material that are added to existing sites or those that are significantly updated should still be required to comply. Organizations should furthermore be encouraged to retrofit their site, even if only progressively.

- Modified material should be considered functionally.
In order for a requirement for new, updated, or modified material to be meaningful, this should be understood in a functional rather than a page-centric manner. For example, if an entity posts a new press release on its site using the same inaccessible template (site navigation, branding, etc.) used elsewhere throughout the site, the components that make up the template should not be defined as new, updated, or modified, simply because they appear on a new page. These components are part of the overall site structure, which hasn't changed, and therefore should continue to be covered under the safe harbor provision. When elements such as the navigation are changed for the site as a whole, or for some sub-section of the site, then in that case, those should cease to be considered within the safe harbor and should be subject to accessibility requirements.
- Web sites that are relevant evolve.
Accessibility advocates may lament that a safe harbor provision means that wide swaths of the Web will remain inaccessible for some time to come. While this is true, it is important to remember the nature of content on the Web. Unlike books in a library whose content *and presentation* remain eternally fixed, material on the Web is constantly subject to change or becomes increasingly irrelevant. While not an absolute ironclad rule, it certainly reflects the reality of the overwhelming majority of material on the Web. It can be debated whether content becomes irrelevant because it stagnates or is allowed to stagnate because it becomes irrelevant. Both dynamics are probably at play. The point is that relevant material is updated and because of this by its very nature, it will move out of the safe harbor by itself, gradually making accessibility the norm across broader and broader sections of the Web.

Question 11

Should the Department take an incremental approach in adopting accessibility regulations applicable to websites and adopt a different effective date for covered entities based on certain criteria? For instance, should the Department's regulation initially apply to entities of a certain size (e.g., entities with 15 or more employees or earning a certain amount of revenue) or certain categories of entities (e.g., retail websites)? Please provide as much detail and information as possible in support of your view.

Response

No, there should not be an incremental approach in terms of time line.

- There is no need for an incremental approach.
Because the proposed schedule gives entities both small and large ample time to comply, as discussed in the answer to Question 9, there is little benefit to a phased-in approach. By contrast, a phased-in approach is likely to introduce confusion over which entities are covered and when, as well as to complicate both compliance and enforcement efforts.
- Safe harbor provisions further obviate need for an incremental approach.
If there is to be a safe harbor provision, effectively exempting existing material,

as argued for in response to Question 10 above, there is no benefit to an incremental approach, since new staff can be hired, existing staff can be retrained, and work procedures can be modified within the specified time frame.

E. Cost and benefits of website regulations

Question 12

What data source do you recommend to assist the Department in estimating the number of public accommodations (i.e., entities whose operations affect commerce and that fall within at least one of the 12 categories of public accommodations listed above) and State and local governments to be covered by any website accessibility regulations adopted by the Department under the ADA? Please include any data or information regarding entities the Department might consider limiting coverage of, as discussed in the “coverage limitations” section above.

Response

Nothing of further value to add in response to this question.

Question 13

What are the annual costs generally associated with creating, maintaining, operating, and updating a website? What additional costs are associated with creating and maintaining an accessible website? Please include estimates of specific compliance and maintenance costs (software, hardware, contracting, employee time, etc.). What, if any, unquantifiable costs can be anticipated from amendments to the ADA regulations regarding website access?

Response

The additional costs associated with creating an accessible website can come in the form of the following efforts:

- Review of information architecture and visual designs.
An accessibility expert should review the information architecture and visual designs of a website before coding begins to ensure there are no accessibility pitfalls. In my experience in a well managed process with talented professionals, this review and the subsequent time to make the proposed changes has taken 20 person-hours or less. With appropriate accessibility training for information architects and visual designers, this can be even less.
- Development of accessible web pages.
Pages will have programmed primarily on the front-end (client-side) to adhere to accessible practices. Once a developer has been properly trained in these techniques, the additional effort to code in this fashion is minimal. This is comparable to the additional effort required to code pages that adhere to Web Standards. As discussed previously, these Web-Standards techniques were once considered particularly rigorous and more time consuming. Today, they are considered the norm for professional web development and the savings such code delivers in more efficient maintenance far outweigh any extra time required to initially write it. Accessible coding practices can be expected to be seen the same way. See the response to Question 10 for more details pertaining to development costs.

- Compliance and review.
Accessibility compliance will need to be integrated into the quality-assurance process. It is likely that quality-assurance professionals will need to rely on the services of an accessibility specialist to ensure proper compliance. This specialist can be an in-house staff member or can be an outside consultant brought in for this part of the effort. In larger endeavors, an accessibility specialist may be part of the quality-assurance team itself.

Question 14

What are the benefits that can be anticipated from action by the Department to amend the ADA regulations to address website accessibility? Please include anticipated benefits for individuals with disabilities, businesses, and other affected parties, including benefits that cannot be fully monetized or otherwise quantified.

Response

There are undoubtedly many benefits that can come from the Department's action on website accessibility, to name a few, these include:

- Greater availability of information and services by persons with disabilities.
This action will clearly foster the Department's stated aim of achieving the "ADA's promise to provide an equal opportunity for individuals with disabilities to participate in and benefit from all aspects of American civic and economic life" in today's technologically advanced society.
- Improvements in search-engine effectiveness.
Much of the effort of making websites accessible involves making the information contained in websites available, if not meaningful, to technology so that it can be relayed to humans. For instance, descriptive text associated with images that a screen reader voices to the user. Search engines such as Google benefit from this, too, because they traverse the Web in a way analogous to the way a blind person does, gleaning pertinent information from those text alternatives for graphic images. A more accessible web will mean a more search-friendly web. This will benefit the covered entities by making them more easily and more meaningfully findable on the Web. It will also benefit society as a whole by improving their ability to accurately find and identify material on the Web.
- Enhanced usability for all users: "curb cuts."
Accommodations made for persons with disabilities in the past have often paid dividends for the public at large, often even more so for the able-bodied community than for the original target community of persons with disabilities. For example, curb cuts to facilitate access to sidewalks from streets are typically used much more often by baby strollers and grocery caddies than they are by wheelchairs. Similarly, captioned television is watched by hearing people in countless noisy bars and gyms every day. A web example might be providing transcripts for audio and video content which can benefit people who don't have speakers installed, who do not want to bother coworkers with noise, who are

accessing content in a noisy environment such as public space or public transportation, possibly on a mobile device, who have difficulty understanding a particular spoken language or accent, or who simply can read the information faster than they can listen to it. Not to mention that this content will be more easily findable through search engines.

- Greater usability by a graying population.
While disabilities are often thought to be an exception or minority experience, accessibility considerations help address difficulties almost all people will experience as they age. Among others these include diminished eyesight, reduced motor control, and loss of hearing acuity. As the population of the United States grays, this will become applicable to a greater percentage of people. Accommodations for persons with disabilities will further benefit a larger audience since everyone ages.
- Access to larger markets for covered entities.
By having an accessible website, entities of all sizes will gain access to the market of persons with disabilities. After all, persons with disabilities cannot make purchases on a site they cannot use. Estimates vary for the size of this community between 8-15% of the overall population. It should be noted that persons with disabilities might disproportionately make more use of e-commerce than those without disabilities. For instance, it is much easier for a person with blindness to browse the product selection of an online store than to stand in a brick-and-mortar store with product samples and descriptions in front of them. Similarly, it might be more effective for someone with a mobility disability to make purchases online from home, especially from sites that offer free shipping, than to take a wheelchair to a physical store location. As an additional note, it is important to keep in mind that persons with disabilities purchase goods and services that they might themselves not be able to use. Persons with disabilities generally have friends, families, and colleagues without disabilities and do purchase products and services on their behalf. A purchasing agent with blindness may be responsible for the acquisition of computer monitors; a parent with deafness may purchase or manage online music on behalf of their children; a person with a motor-control disability may consider the purchase of art lessons as a gift for someone else.
- An even playing field in the market.
Currently, there is a patchwork of legal decisions and precedents as a result of the different lawsuits on the issue of whether Title III of the ADA is applicable to private-company websites. By clarifying this application of Title III, the Department will remove uncertainty about entities' obligations and provide a consistent level playing field across the country. This provides a more efficiently competitive environment.
- Improved semantic groundwork for future technologies.
Much like accessibility considerations can improve search engine results, they also provide a greater degree of machine understandability to online content, referred to as "semantics." This is a driving force behind the innovations currently being developed in HTML5, one of the Web's technological underpinnings. An

understanding of the benefits of the semantic web is still in its infancy, and we can only guess what benefits future innovations will bring, but recognition of its importance is wide.

- Enhanced global competitiveness.
As mentioned in the response to Question 1, the US's trading partners are enacting their own regulations for web accessibility. US companies in a position to meet these requirements will be in a better position to compete against foreign companies in markets here at home and abroad.

Question 15

What, if any, are the likely or potential unintended consequences (positive or negative) of website accessibility requirements? For example, would the costs of a requirement to provide captioning to videos cause covered entities to provide fewer videos on their websites?

Response

Like any action, there is the possibility of unintended consequences. Some of the ones to consider include:

- Greater barrier to providing multimedia (negative).
Accessibility for multimedia content is a particular challenge. Requiring audio content to have a transcript and video content to be captioned of course creates an additional hurdle to providing multimedia content online. In 2009, Google software engineer Ken Harrenstien, who has deafness, wrote "Every minute, 20 hours of video are uploaded. How can we expect every video owner to spend the time and effort necessary to add captions to their videos? Even with all of the captioning support already available on YouTube, the majority of user-generated video content online is still inaccessible to people like me." He went on to announce that Google, using speech recognition, was now providing free automatic captioning for videos on its YouTube service. Challenges exist, but solutions to meet these challenges are constantly being developed.
- Increased quality of content of audio-video content (positive).
Providing a transcript of audio content is a good practice anyway, and a web accessibility requirement. There are two approaches to this: preparing a written "script" first and then delivering the script in an audio and/or video format, or delivering the material first and then producing a written transcript after the fact based on what was spoken. The first approach of writing the script in advance is much easier and cheaper than it is to create a transcript from audio content afterwards. While this is not always possible, my experience has been that when this is done, it leads to more thought-out, better organized, and generally more coherent content.
- Also see the benefits detailed in the response to Question 14 for additional possible unintended consequences.

Question 16

Are there any other effective and reasonably feasible alternatives to making the websites of public accommodations accessible that the Department should consider? If so, please provide as much detail about these alternatives, including information regarding their costs and effectiveness in your answer.

Response

The approach of providing alternatives is not effective. Please see the response to Question 8 above for more detail.

F. Impact on small entities

Question 17

The Department seeks input regarding the impact the measures being contemplated by the Department with regard to Web accessibility will have on small entities if adopted by the Department. The Department encourages you to include any cost data on the potential economic impact on small entities with your response. Please provide information on capital costs for equipment, such as hardware and software needed to meet the regulatory requirements; costs of modifying existing processes and procedures; any affects to sales and profits, including increases in business due to tapping markets not previously reached; changes in market competition as a result of the rule; and cost for hiring web professionals for to assistance in making existing websites accessible.

Response

- Costs mostly involve modifications to processes and additional worker time. There are few, if any, hardware costs associated with the measures being contemplated. As discussed in the response to Question 6, there are several free software options available to and appropriate for small entities. See the response to Questions 10 and 13 for more details on some of the costs related to process and worker time.
- See the answer to Question 14 on some of the impacts that will affect small entities.
- See the response to Questions 1 and 14 as regards competitiveness.

Question 18

Are there alternatives that the Department can adopt, which were not previously discussed in response to Questions 11 or 16, that will alleviate the burden on small entities? Should there be different compliance requirements or timetables for small entities that take into account the resources available to small entities or should the Department adopt an exemption for certain or all small entities from coverage of the rule, in whole or in part. Please provide as much detail as possible in your response.

Response

Providing a small-business exemption will negatively impact the stated goals of the Department in pursuing this action. Any exemption should be consistent with other similar exemptions under the ADA.

As discussed in the answers to Questions 6 and 9, the time frames are reasonable for small entities and there are many affordable resources available to them as well. However, as discussed in Question 13, there are costs involved in this effort. While these may impact small entities more than they do large ones, as discussed in the response to Question 14, there are also benefits that can accrue to smaller entities from this action. Moreover, the nature of e-commerce allows smaller entities to compete more effectively with larger entities more than in the pre-internet era.

G. Other issues

Question 19

The Department is interested in gathering other information or data relating to the Department's objective to provide requirements for Web accessibility under titles II and III of the ADA. Are there additional issues or information not addressed by the Department's questions that are important for the Department to consider? Please provide as much detail as possible in your response.

Response

Implicit in the framing of this advance notice of proposed rulemaking is the paradigm of a website experienced through a web browser installed on a computer, perhaps with some form of assistive technology. However, much of the material being considered is increasingly being delivered, consumed, and created on mobile devices, sometimes through the Web directly, other times indirectly through the use of native mobile apps. In order not to be blindsided by this rapidly developing technological shift, the Department in formulating its action should consider explicitly mentioning mobile devices, or, better yet, clarifying that the scope of its action is device and technology neutral.