

Research paper on impact of americans with disabilities act - section 508 on info...

[Technology](#)



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Impact of Americans with Disabilities Act - Section 508 on Information Technology

Being a democratic nation that provides, “ political and social equality of rights and privileges” (Dictionary. com) to its citizens, the United States of America passed the Americans with Disabilities Act (ADA) as a complete federal law prohibiting discrimination against anyone on the basis of his/her disability. The ADA defines an individual with a disability as, “ a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such impairment, or a person who is perceived by others as having such impairment” (ADA). ADA offers protection only to a person who is either himself disabled, or is associated or related to another disabled person, and “ strictly prohibits any kind of discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation and communication making it applicable to the United States Congress also.” (ADA).

Section 508 was originally a part of the Rehabilitation Act, that recognized information technology as a newly emerging and growing academic and professional field. “ At that time people with disabilities could work on the computers very easily, with everyone using almost the same word processing software packages. For example, visually challenged people used “ screen readers” instead of monitors, to be able to read in a unified voice,

all the text and punctuation read by a normally sighted person on the monitor.”(U. S. Department of Justice) However, technological advancements along with the omnipresence of computers in all spheres of life brought about changes that made it challenging for disabled people to use them, thereby, automatically resulting in the creation of a discriminatory environment. This changing trend necessitated amendment to the original section 508, signed by President Clinton in August 1998, “ that required accessibility of federal electronic and information technology (EIT) , including federal websites, telecommunications, software, hardware, printers, fax machines, copiers and information kiosks to disabled people.” (U. S. Department of Justice)

Since the implementation of the amendment, the maximum impact has been witnessed in the field of Information Technology (IT) - the indiscriminate accessibility of which to the disabled laid the foundation stone for this change. This has gifted IT with a holistic and a globally acceptable appearance both at the academic and professional level, by accommodating the needs of people with all sorts of disabilities. “ Educational institutions now seem more committed than before in ensuring seamless and smooth availability of educational content using the latest technological tools to all their students, indiscriminately, regardless of their disability. Further, some schools are also providing technical help desk to train their students in using assistive technology.”(Helsine, n. d.) As far as the question of propagating the benefits of the same technological advancements to the employees and organizations is concerned, “ the federal government is playing a key role in this direction by making compliance with the standards for section 508

mandatory for all companies that are inclined towards entering into a business relationship with it.” (DClab. com, n. d.) Even most of the IT companies today are trying to keep pace with this new trend and making their work environments disability-friendly so as to offer the warmest welcome to their unique co-workers. Microsoft Corporation is one such tech giant that has made ease of access an integral feature of all its products, which are purely technology-based. For example, its Windows 98 Operating System Control Panel comes with an assistive technology - an Accessibility Options Icon that allows for a user-friendly software-hardware interaction. Further, the Shift, Control or Alt keys can be used in a single keystroke through the use of StickyKeys, and repetitive key strokes can be avoided, with the FilterKeys ignoring them by lowering down the repeat rate, whereas, the ToggleKeys emit sounds when certain keys are pressed. If this is not enough, then the existing high-color contrast options along with the ability to turn the numeric pad into a key pointer as well as the possibility of using alternative keyboard and mouse features lends completeness to this accessibility cycle. Likewise, companies such as Science Applications International Corp. and consulting firms like Booz-Allen & Hamilton Inc. provide their federal clients with a diverse service experience that ranges from modifications of websites & computer systems to facilitation of the choice of the adaptive technologies required by the federal agency to support their employees.

However, an important point to be noted in all the above arrangements is that merely providing access of a particular hardware or software tool or technology to a disabled person is not sufficient, unless it also caters to the

type of disability he is suffering from, thereby, allowing him to work comfortably. This is clear from the amended section 508, that clearly states, “ An accessible information technology system is one that can function in many ways and operate without depending on a single sense or ability or skill of the user.” (Rehabilitation Act) For example, a system that only provides a visual output may be difficult to use by a visually challenged person. Similarly, a system that only provides an audio output will not be of much use to a person with hearing disabilities. All this requires a clear understanding of the gamut of disabilities which people suffer from, that erect barriers to their using of a particular technology effectively, and then offering them a tailor-made adaptive technological solution. “ These barriers can be functionally categorized into (Burghstaler, 1992) : (a) those hindering providing computer input; (b) those hindering interpretation of computer output; and (c) those hindering reading supporting documentation. They can be removed by using adaptive hardware & software developed in accordance with the following approaches:

a. Input – Flexible positioning of the computer equipment such as keyboards, monitors, computer tables etc. is a boon for disabled people. For example, mounting the keyboards on perpendicular tabletops or wheel-chair trays at head-height can help someone who has limited mobility and uses pointing devices to press keys. Similarly, software utilities like “ sticky keys” that electronically latch SHIFT, CONTROL & other keys to allow sequential “ non-repetitive” key strokes, help people typing with one finger. Finally, in case of severe mobility impairments one can either use keyboard simulation or Morse code input, whereas, those lacking fine motor control skills can resort

to the use of “ keyboard guards”, which are solid templates with holes over each key enable precise key selection while typing something.

b. Output – Speech output systems such as “ screen readers” can be used for blind computer users. Further, Refreshable Braille displays allow verbatim translation of the screen text in Braille language for the benefit of students with visual impairments, who can also obtain hard copies of the material through Braille printers.

c. Documentation – to provide support in reading documentation, OCR scanners, that read and store printed material electronically in the computer, can be used. That material could then be read using speech synthesis or even be printed using Braille printers.

The above barriers and the innovative ways to combat them, that were mere ideas, two decades ago, are today being increasingly implemented by manufacturers in the hardware, software & operating systems dished out from their factories, though partly in compliance with the federal government’s requirements, but also partly in recognition of the paradigm shift taking place in the thought process of the society, with respect to disability, that at one point of time was considered as a social stigma, and a sufficient ground for blatantly disproportionate allocation of opportunities and resources amongst people. All these developments seem to be serving as the stepping stone for triggering a trend that puts both the able-bodied and disabled people on the same societal pedestal, giving lee-way to the emergence of a new and strong “ human being”, who despite being disabled is fully conscious of his rights and duties, and is no longer ready to get exploited for bodily defects that he is not all responsible for.

I would like to conclude this paper by reiterating the above point in the words of Dennis DeMolet, – who himself is not only a disabled Professional Marketing Consultant at DCL Labs Inc., but is also an expert both on the rights of disabled persons and fine intricacies of Section 508. He rightly states, “ If a worker requests an accommodation, and the employer says ‘ no’, the employee automatically has a case.” Citing an example of a case that took place in a private company between a disabled female employee and her employer, DeMolet states, “ a worker who was deaf in an ear needed a headset that cost \$200. When the company denied the employee’s request for assistance to perform her job, she sued them. Even the judge decided that it was not unreasonable for the company to spend the money in order to accommodate the worker and ordered it to do so.”

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