

## **ADA Law and Self-Service Kiosks**

by Derek Fretheim, President, Acire Inc.

I've been in the self-service kiosk industry for nearly 15 years and completed hundreds of kiosk projects. The first kiosk project I was involved with was funded by the California Department of Transportation (Caltrans) right after the Northridge earthquake in 1994. In those days a state-of-the art kiosk used an IBM 286 with the largest available hard drive – 4GB. If you wanted rich media content with video, you had to master large laser discs; quite an expensive proposition when you want to change or modify content. This was the pre-Internet era when a dedicated T-1 line cost \$2,200 per month. Back in 1994, access to kiosks was not really considered with any project. No real surprise, since regulations often occur after something is developed or demand creates equal access rules. Sure ADA was law, but hardly anyone knew how to decipher it.

Today it is a much different story. The advances in technology are evident with that same hard drive (memory) being easily found in a camera card or USB micro drive. Multiple kiosks are found in nearly every grocery store for various types of applications. It's true for regulations as well. The American Disabilities Act (ADA) is in full force with a number of rules applying to kiosks.

### **ADA History**

Signed into law by President Bush on July 26, 1990, the Americans with Disabilities Act (ADA) is undeniably the most comprehensive formulation of disability rights in the history of the United States or of any other nation. More than fifty (50) million Americans have some kind of physical, sensory, cognitive, or mental disability.

Basically, the Americans with Disabilities Act prohibits discrimination on the basis of disability in the areas of employment, public services provided by state and local governments, public services operated by private entities, transportation, and telecommunications. ADA regulations place far-reaching provisions and definite laws for employment, state and local government, transportation, public accommodations, and telecommunications. There are three specific titles in ADA law. Title I addresses employment and prohibits discrimination to individuals with disabilities. Title II addresses access to programs, activities, and services of public entities and prohibits discrimination to individuals with disabilities. Title III addresses public accommodations by private business and prohibits discrimination to individuals with disabilities.

### **Who Regulates ADA?**

The US Architectural & Transportation Barriers Compliance Board (ATBCB) or "Access Board" oversees the Americans with Disabilities Act and related matters such as compliance issues, clarification, guidance etc. The ADA accessibility guidelines specifically mention ATMs, but not kiosks. The question is whether ADA and accessibility guidelines cover kiosks and information transaction machines (ITMs), as well as ATMs. The conclusion from the Accessibility Board is interactive kiosks are covered under ADA, and that the accessibility guidelines are the best relevant guidance available.

So let's breakdown ADA specific to kiosks and determine if ADA law applies to your self-service project. We'll start by asking a few qualifying questions.

1. Is the kiosk going to be used in a public environment? If Yes, ADA applies.

2. Is the kiosk going to be used internally only for employee use? If Yes, ADA applies.
3. Is the kiosk operated by a Federal, State, City or other governmental organization? If Yes, ADA applies.
4. Does the kiosk or any portion of the project receive any Federal funds? If, Yes, ADA applies. In addition, Section 508 Guidelines are in force.

### **ADA and Kiosks**

Let's break down ADA as it applies to kiosks. Basically, ADA laws insure the kiosk owner will provide equal access for persons with disabilities. This means hearing and visually impaired individuals and persons with physical disabilities who may be confined to a wheel chair must have equal access in the same manner that an individual who has no physical disability. In a self-service kiosk application, this not only applies to accessibility to the kiosk but also to the touch screen and other peripherals, such as a keyboard, bill acceptor, printer, etc.

First, let's review access to the kiosk. ADA law states there must be clear accessibility to the kiosk. In other words, enough room so a person in a wheel chair can maneuver to the screen – gain access. The law requires at least 34-inches of clear space directly in front of the kiosk for persons in wheel chairs. If there is a requirement for access from the side, then there must be 34-inches of clear side access as well. Second, let's review access to the touch screen and components. The law provides ranges of maximum and minimum height for components with unobstructed and obstructed forward reach and unobstructed and obstructed side reach. Unobstructed reach can be defined as a kiosk system that has no large protruding extension which

would prevent or hinder a person interacting with the component. Obstructed reach is defined as a kiosk system that would contain a large shelf/counter and/or having a recessed monitor which would limit access to the component by the user. Here are front reach and side reach access as defined in ADA law.

Front reach unobstructed access – Minimum of 15-inches from the floor and maximum of 48-inches high from the floor (see Figure 1).

Front reach obstructed access – Set back of zero to 20-inches with maximum of 48-inches high from the floor for the component. The law will allow a set back of 25-inches, but the maximum height drops to 44-inches high from the floor (see Figure 2).

Side reach unobstructed access – Maximum of 48-inches high from the floor (see Figure 3).

Side reach obstructed access – Set back of zero to 10-inches with maximum of 48-inches high from the floor for the component. If the set back is within the range of 10-24-inches then the maximum height drops to 44-inches high from the floor (see Figure 3).

Here's where ADA gets tricky. Placement of components will also determine maximum height. A shelf should range from 28 to maximum of 32-inches from floor. This should serve as a good benchmark for input components such as a keyboard, credit card reader, pin pad, etc. Additionally, individual components or functions may require guidance outside of simple access to the kiosk and its components. By example, if the kiosk has a telephone handset, then ADA specifies the type of handset

and functional requirements needed. Like wise, if the application has audio, then ADA defines how to address individuals with a hearing impairment. Lastly, signage elements for components and directions placed on the kiosk will require raised characters and other provisions listed in ADA Chapter 7.

In summary, I have yet to see any project be exempt from ADA regulations, so I am very confident ADA applies to any kiosk project. The process of understanding ADA can be complicated so it is important you conduct proper research to determine the kiosk meets ADA law. I encourage to use the “if – then” process for every component and function. Build a matrix to insure compliance. The matrix should be something like: If a touch screen, then the maximum height of the monitor should not exceed 48-inches. If a touch screen, then these (Specify) type(s) of touch technologies comply with ADA. If a shelf, then the maximum height of the shelf should not exceed 32-inches. If a telephone handset, then the height shall conform to ADA guidelines (Chapter 3, 308 Reach Ranges) and audio controls must meet guidelines (Chapter 7, 704 Telephones). The process of understanding ADA can be overwhelming, but with proper research and planning complying with ADA law can be accomplished

### **Online Resources**

ADA Home Page

<http://www.ada.gov/adahom1.htm>

Reach Ranges

<http://www.access-board.gov/ada-aba/final.htm#pgfld-1008283>

Accessibility Standards for Accessible Design

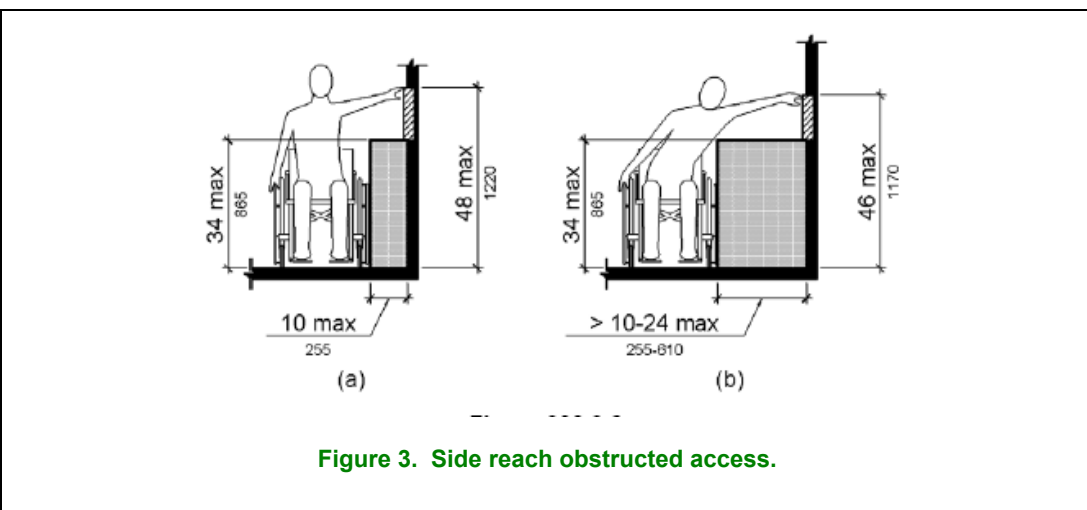
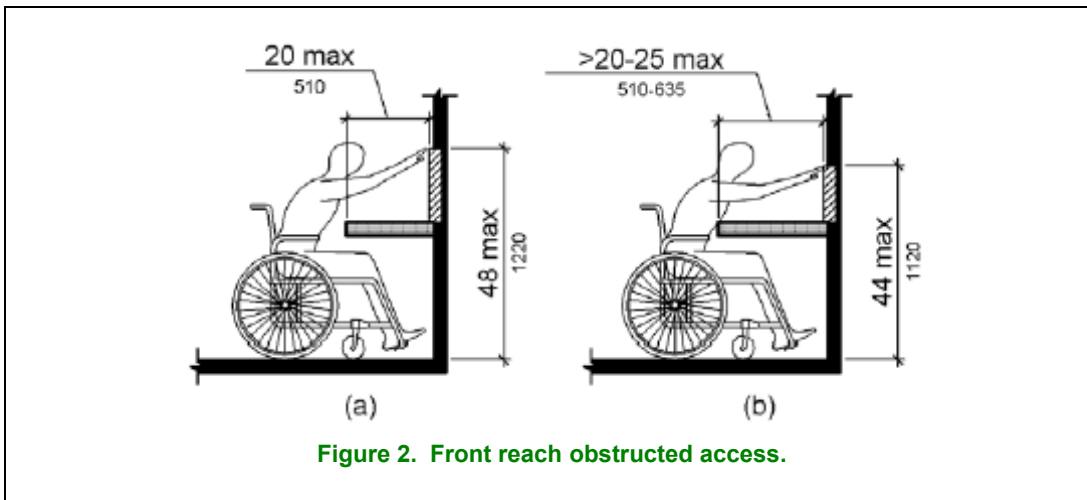
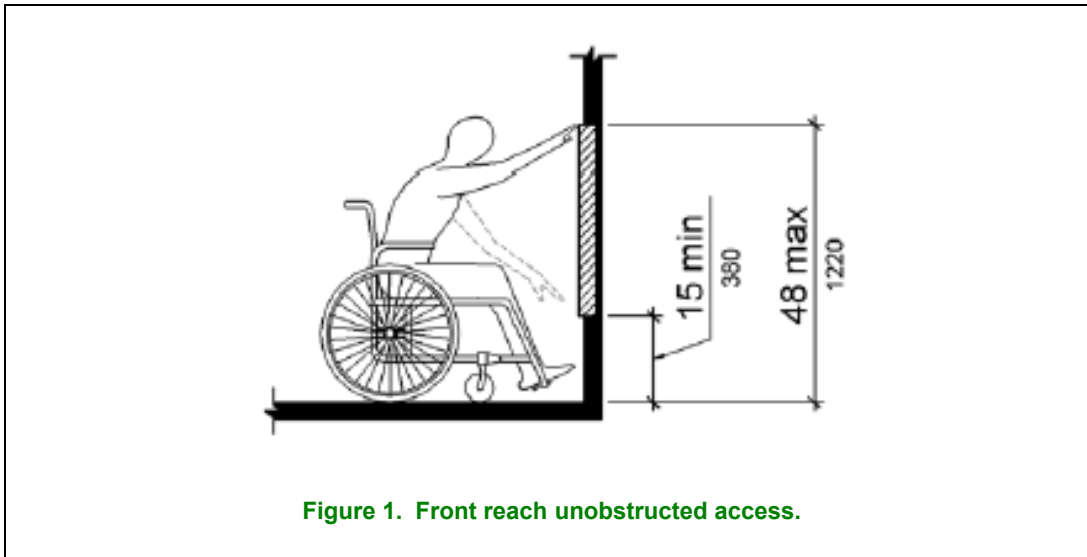
<http://www.ada.gov/stdspdf.htm>

Section 508 – Federal Buying Standards

<http://www.section508.gov/>

Derek Fretheim is President of **Acire, Incorporated** a consulting firm specializing in managing technology systems including web-based processes and self-service kiosks. Mr. Fretheim has designed self-service solutions for companies such as NBC, Compaq Computer, Long Beach Transit, City of San Jose, and the Los Angeles County Metropolitan Transportation Authority. He has won best kiosk enclosure design from KioskCom in 2005 and 2006 and designed the first Section 508 approved kiosk for the Legal Aid Society. Mr. Fretheim can be reached at [dfretheim@acireinc.com](mailto:dfretheim@acireinc.com) or 949-275-6365.







This Coinstar kiosk does not meet current or past ADA regulations.

The monitor height is 60-inches with a 7-inch set back.

The coin receiver is too high.

The signage does not meet ADA regulation.



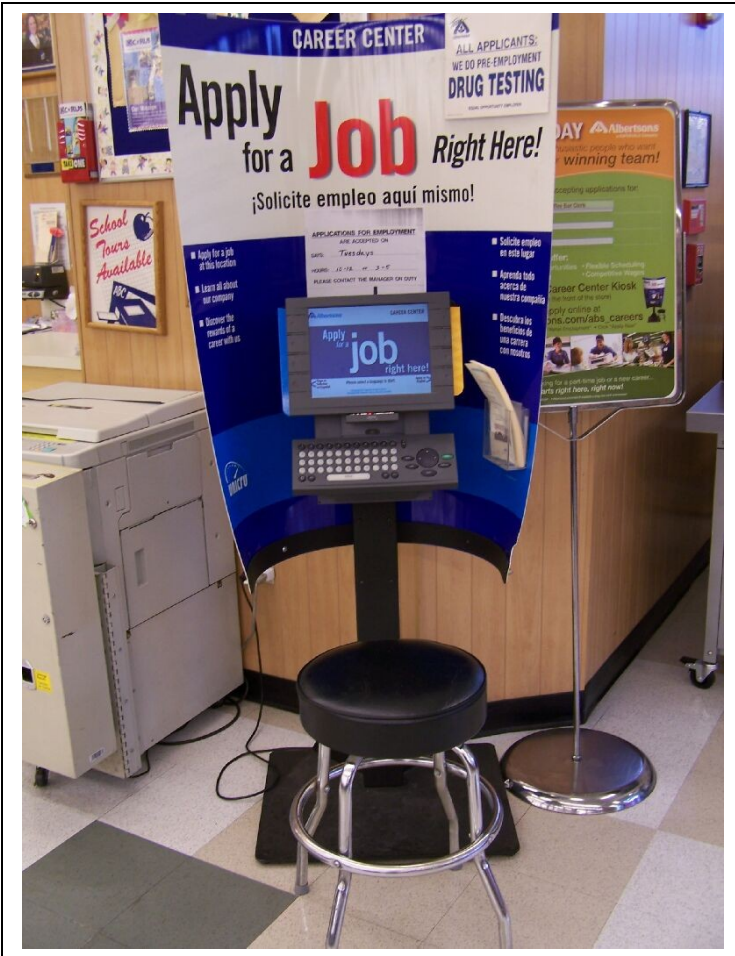
This Red Box kiosk meets current ADA regulations.

The touch screen monitor height is 48-inches with a one inch set back.

The credit card reader is well positioned.

Though, the directional information (signage) does not meet ADA law.





This employee recruitment kiosk meets current ADA regulations.

Though not a touch screen, the monitor height is below 48-inches with the keyboard shelf at 32-inches.

The signage is not ADA compliant.

The chair is movable. If the chair was fixed to the kiosk then it would not be ADA compliant.

This California Lottery kiosk meets current ADA regulations.

Thought they should have some remote monitoring, the Achilles heal of our industry is the “out of order” sign.

The monitor height is at 48-inches with a set back of 3-inches.

The touch technology used is resistive and is compliant with ADA law.

The components are accessible including the lotto blank forms.

The signage is not ADA compliant, but the Braille instructions make the ADA compliant.

