

NCD POSITION PAPER ON ACCESS TO AIRLINE SELF-SERVICE KIOSK SYSTEMS

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Executive Summary

Advances in information technology, termed “IT,” have enabled the airline industry to improve the quality and efficiency of its services delivery while reducing operating costs. But the airlines would leave travelers with disabilities out of the IT loop, failing to offer them the same benefits and convenience of service available to other travelers. The airlines’ resistance to providing customer services through fully accessible kiosks and Web sites disregards the capacity of accessible IT to empower people with disabilities to do for themselves.

Kiosk technology is an essential component of the IT-based customer self-service business model that is pervading the air-travel industry. Automated kiosks employed by the industry (frequently called self-service or check-in kiosks) are networked peripheral IT devices whose interfaces give consumers direct access to companies’ centralized customer-service systems.

The air carrier industry has failed to acknowledge its legal obligations to provide equal access to passengers with disabilities, advances in access technology, and the significant economic benefit the industry derives from air travelers with disabilities. Under Part 382 of the Air Carrier Access Act (ACAA), air carriers are responsible for airport facilities or services that they “own, lease, operate, or otherwise control.” Self-service kiosk systems

clearly fall within Part 382.23's encompassing language, which incorporates the Americans with Disabilities Act (ADA) Title III standard for accessible design.

The ADA's statutory language exempts transportation "by aircraft." However, airport terminals owned and operated by government entities are covered by Title II of the ADA, and airport terminals open to the public are "commercial facilities" covered by Title III of the ADA. Both are subject to ADA access requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Additionally, airports that receive federal financial assistance are subject to Section 504 of the Rehabilitation Act. According to the U.S. Department of Transportation (DOT), "in order to be in compliance with Section 504, recipients must also be in compliance with all applicable regulations under the ADA."

Although no airline-kiosk vendor serving the U.S. market has included accessibility among its product features, vendors confirm that they foresee no significant technical obstacles to development and deployment—using existing access technology—of fully accessible kiosk systems. A leading authority on accessibility technology estimates that the costs of access hardware and software modifications for a fully accessible system would not exceed one to two percent of the overall cost. However, the airline industry has yet to acknowledge the need for such a product.

The airline industry might consider IT's impact on a market segment, travelers with disabilities, that contributes increasingly to air travel's bottom line. The banking industry's experience with accessible ATM technology, paralleling in many respects the airline industry's experience with kiosk technology, is instructive. Although the technological and legal underpinnings may differ, individual airlines may find, much as individual banks have found, that workable solutions exist. Entering into structured negotiations may help to resolve the issue.

After a careful examination of the technological and legal issues, the National Council on Disability's conclusion is that U.S. air carriers and airports have obligations under federal accessibility laws and regulations to provide cross-disability access to their kiosk systems. Those carriers and airports operating kiosk systems not in conformity with ADA's standard for accessible design (which is also ACAA's standard) are out of compliance. NCD recommends that DOT adopt an updated ACAA standard for accessible design applicable to these kiosk systems and that DOT then initiate settlement negotiations with covered air carriers and airports to bring their kiosk systems into full compliance.

IT's the Future

"There was absolutely no way I would make my flight.... Jumping the queue was impossible.... I looked for help. There, sitting ignored amid the madding crowd, was a machine." So begins technology analyst Michael Schrage's account of his serendipitous encounter with a newly installed automated ticketing kiosk.¹

"No waiting. I scurried over and stuck in my American Express Card. Seconds later, my name and flight to Munich popped up on-screen. Four or five more touch-screen taps and I was sprinting to security, clutching my boarding pass and receipt. The door closed behind me the moment I boarded my flight."

Today's air-traveling public is fast becoming accustomed to negotiating airports as expeditiously as did Mr. Schrage. With the past decade's revolutionary advances in information technology, termed "IT," the airline industry is succeeding in improving the quality and efficiency of its services delivery while reducing operating costs. Electronic-ticketing, automated kiosks, services via the Web, Radio Frequency Identification (RFID) baggage tracking, biometric screening, and bar-coded boarding passes now promise an unencumbered and near-seamless experience for most travelers. But the airlines would leave travelers with disabilities out of the IT loop, failing to offer them the same benefits and convenience of service available to other travelers.

The airline industry's exclusion of consumers with disabilities from many of the advantages conferred by advances in customer-service technology is puzzling. In today's IT-enabled culture, consumers with and without disabilities enjoy full access to merchandise and banking online, cash from ATMs, stamps from postal kiosks, and automated transactions by credit card. The airlines' arbitrary position, particularly their resistance to providing customer services through fully accessible kiosks² and Web sites,³ disregards the well-demonstrated capacity of accessible IT to empower people with disabilities to do for themselves.

The airlines' stance also is at odds with DOT's stepped-up initiatives supporting the legal rights of air travelers with disabilities.⁴ The Department has begun to address enforcement inconsistencies and inadequacies identified by NCD in its 1999 report.⁵ NCD joins with the disability community in endorsing DOT's recent enforcement actions and in encouraging air carriers to eliminate any vestiges of a regrettable history of disability-based discrimination.

In recounting the past ordeals of air travelers with disabilities, NCD's report characterized their experiences as not for the faint of heart. "Often, people with certain disabilities either chose not to fly or traveled by air knowing they would probably face prejudice, hostility, disability stereotyping, as well as architectural and other physical barriers; sometimes they faced an outright denial of their right to travel."⁶ And, despite the fact that the Air Carrier Access Act (ACAA),⁷ which prohibits discrimination on the basis of disability in air transportation, is now 20 years old, the need for further strengthening and robust enforcement of its regulations and standards has not diminished.⁸

By integrating fully accessible IT into its customer-service systems, the airline industry has an immediate opportunity to provide consumers with disabilities an experience closely approximating that of other air travelers. Were fully accessible customer-service systems to be deployed, many air travelers with disabilities could elect⁹ to make reservations and purchase tickets, not only by phone (using TTYs or TRS when needed), but also on accessible e-commerce Web sites, or at accessible self-service kiosks. These same travelers would enjoy more efficient check-in, expedited security screening, and unimpeded access to

nearly all airport and airline services available to other travelers. Absent explicit regulatory guidance from DOT, however, this opportunity will likely go unaddressed.

Kiosk Technology

Vendors of automated ticketing kiosks can approach hyperbole when describing their technology—“You won't find anyone who flies a lot who won't just hug these machines.”¹⁰ Nonetheless, recent data from the annual Airline and Airport IT Trends Surveys, which report on the current and predicted IT status of the majority of the world's major airlines and airports, confirm that kiosk systems, along with other IT advances, are steadily transforming airline passenger operations.

In 2005, nearly a third of carriers participating in the Airline IT Survey¹¹ operated proprietary (serving a single airline) kiosks (largely in their home markets), and 50 percent expected to operate kiosks within the next several years. Over 50 percent of these carriers predicted that the majority of their passengers would be using kiosks within the next three years (largely within their home markets). Also in 2005, Airport IT Survey¹² participants reported at least 50 percent of airports worldwide to have deployed some form of self-service kiosk, and these airports anticipated their kiosk installations to reach 75 percent over the next two years. These percentages suggest that self-service kiosks will soon become a principal venue for transactions between passengers and air carriers.

Kiosk technology is an essential component of the IT-based customer self-service business model that is pervading the air-travel industry. This model, which gives more convenience and control to passengers throughout their travel experience, benefits air carriers as well. The self-service model reduces or in some instances eliminates the requirement for airline personnel to “interface” for passengers, repetitively performing tasks that passengers often are willing and able to do for themselves. Many airlines are challenged in keeping a large force of ticket agents on standby 24/7 to handle surges in passenger traffic, whereas almost any airline can maintain dozens or even hundreds of kiosks at the ready to issue tickets, baggage tags, seat assignments, and boarding passes. Adopters of the technology assert that

kiosks eliminate tedious repetitive work and free airline agents to deliver “real customer service.”¹³

Automated ticketing kiosks (frequently called self-service or check-in kiosks) are a subset of the more encompassing category of information technology known as Interactive Transaction Machines (ITMs). Automated teller machines (ATMs), patented in 1973 and extensively adopted by commercial banking in the mid-1980s, now number over 350 thousand in the U.S. alone and are one of the most widely used forms of ITM technology. Unlike some forms of ITMs, however, kiosks employed by the banking and airline industries do not function as standalone devices (such as self-service gas pumps). Rather, teller and ticketing machines are networked peripheral IT devices whose interfaces give consumers direct access to companies’ centralized customer-service systems.

Kiosk systems used in the air-travel industry are of two general types, proprietary (dedicated) and common-use self-service (CUSS), and vendors tend to specialize in one or the other type of system.¹⁴ Proprietary systems, which are often used by individual air carriers, are usually owned/leased and operated by the airlines themselves. Common-use systems, which are shared by multiple airlines at an individual site (e.g., Las Vegas McCarran International and Pittsburgh International), are usually owned/leased and operated by local airport authorities. When both types of systems are deployed within a single airport, proprietary kiosks typically are placed near an airline’s own check-in facilities, whereas common-use kiosks may be distributed throughout the terminal(s).

In another innovation, the air-travel industry has begun to make kiosk-like devices available at sites apart from airport terminals. These “check-in desks” may soon be found in hotel lobbies, convention centers, and shopping malls, or at any other location having standard internet access.¹⁵ This evolving pattern will enable passengers to obtain boarding passes, check baggage, and conduct other transactions at times and places of their convenience.

At least a half-dozen vendors provide kiosk products to the air-travel industry.¹⁶ Although these products employ common technologies (e.g., IP, wireless), share similar features (e.g.,

touch screens, card readers, printers), and perform similar functions (e.g., ticketing, check-in, boarding), vendors have not adopted a common design standard for these products.¹⁷ Moreover, no vendor has marketed a fully accessible kiosk product,¹⁸ and the Department of Transportation, under the ACAA,¹⁹ has yet to enforce the Act’s kiosk-applicable standard for accessible design. As a result, consumers with disabilities daily confront an air-travel milieu that is increasingly reliant on a sophisticated technology that can accommodate the needs of travelers in multiple languages but that does not accommodate the needs of travelers with various disabilities.

Regulatory Context

Historically, much of the regulation and litigation attempting to bar discrimination against people with disabilities who use the nation’s airlines and airports has met with frustration and disappointment. One of the early attempts involved the Federal Aviation Act of 1958 (FA Act),²⁰ which contained two provisions—Sections 404 (a) “safe and adequate service” and (b) “undue or unreasonable preference or advantage”—that gradually became linked within case law to prohibit any kind of unjustified discrimination against air travelers. Nevertheless, the Civil Aeronautics Board’s (CAB) constrained enforcement of these provisions (focused on rate and fare issues) resulted in little improvement in access to air transportation for air travelers with disabilities.

In that era, “Airline and airport policies, as a rule, remained unresponsive to the unique needs of people with disabilities, justifying their unresponsiveness on the basis of safety, economics, and the convenience of other passengers.”²¹ Even today, the airline industry continues, routinely, to proffer a similar rationale when opposing DOT proposals accommodating the needs and concerns of the disability community.²²

Section 504

A decade-and-a-half after enactment of the FA Act, the Rehabilitation Act of 1973 held initial promise for air travelers with disabilities.²³ Section 504 of the Act, as amended,

prohibited discrimination on the basis of disability in “any program or activity receiving federal financial assistance.” In 1982, the Civil Aeronautics Board adopted a relatively limited set of regulations, commonly referred to as old Part 382, intended to prohibit U.S. airlines from discriminating on the basis of disability.²⁴ Subpart A, based on Section 404 of the FA Act and applying to all certificated carriers, contained a general prohibition against discrimination on the basis of disability in providing air transportation. Subparts B and C, based on Section 504 of the Rehabilitation Act but applying only to certificated carriers receiving certain direct federal subsidies, contained specific requirements for service to passengers with disabilities and outlined record-keeping, reporting, and enforcement responsibilities.²⁵ Unfortunately for these passengers, CAB construed “federal financial assistance” narrowly and did not consider the requirements under Subparts B and C of old Part 382 to be applicable to most commercial air carriers.

In 1986, this limited application of Section 504 to air carriers by CAB and its successor agency, DOT,²⁶ was challenged in federal court. In *Paralyzed Veterans of America v. CAB*,²⁷ the veterans organization argued that all air carriers receive federal assistance indirectly in the form of federal airport facilities improvement grants²⁸ and federally operated air-traffic control services, and that therefore, the scope of CAB’s regulatory jurisdiction under Section 504 should extend to all commercial airlines. The D.C. Circuit, accepting this reasoning, ruled in the veterans’ favor.

On appeal,²⁹ the Supreme Court rejected the veterans’ argument and reversed the circuit court, holding that the improvement grants (though constituting federal financial assistance) were to airports, not to airlines, and that air-traffic control was a “federally conducted program,” not federal financial assistance. In the Court’s opinion, commercial airlines (other than those receiving direct federal subsidies) were not recipients of federal assistance and thus were not covered by Section 504. Although the Court did not dispute the applicability of the Subpart A general antidiscrimination provision to commercial airlines, the decision’s effect was to exempt most air carriers from requirements under Section 504 to make specific accommodations when providing services to people with disabilities.

In 2004, the limited application of Section 504 to commercial airlines by DOT was again tested. In *Shotz v. American Airlines*,³⁰ plaintiffs argued that Congress's aid package to the airline industry³¹ in response to the events of September 11, 2001, constituted "federal financial assistance," thereby subjecting the air carriers to regulation under the Rehabilitation Act. The district court rejected this argument and dismissed the case, finding the Rehabilitation Act not to be applicable to plaintiffs' claims.

On appeal,³² the Eleventh Circuit observed that, although the Rehabilitation Act does not define "federal financial assistance," the courts have defined the term as used in the Act to mean "the federal government's provision of a subsidy to an entity." Consequently, the court considered whether the government's aid package was intended to subsidize or to compensate the airline industry. The fact that Congress used the term "compensate" throughout the legislation led the court to affirm the district court's dismissal, concluding that the aid was intended as compensation (not as a subsidy) to the industry for the economic crisis precipitated by September 11. The court further concluded that Congress logically would not have intended to expose the industry to additional economic risk by permitting private suits under the Rehabilitation Act, especially given availability under the Air Carrier Access Act of various remedies and enforcement mechanisms.

Despite Section 504's rather narrow coverage of air carriers, its provisions apply broadly to entities (public or private) that do receive federal financial assistance (directly or indirectly). In particular, airports receiving grants from the Federal Aviation Administration (FAA) must comply fully with Section 504 in their provision of employment, services, programs, activities, and physical accessibility. Moreover, according to DOT, "To be in compliance with Section 504, recipients must also be in compliance with all applicable regulations under the ADA including 29 C.F.R. Part 1630, 29 C.F.R. Part 1640, 28 C.F.R. Parts 35 and 36, and 49 C.F.R. Parts 37 and 38."³³

The ACAA

Also in 1986, reacting to the decision in the *Paralyzed Veterans* case, Congress passed and the President signed the Air Carrier Access Act (ACAA).³⁴ The legislation amended the FA Act to incorporate anti-discrimination prohibitions specific to passengers with disabilities and directed DOT to promulgate implementing regulations. Following a lengthy rulemaking process, which involved negotiations with air carriers and the disability community, DOT issued a final rule in 1990 that substantially revised and expanded Part 382 of the FA Act.

The rule³⁵ includes detailed requirements regarding airport and aircraft accessibility, and nondiscrimination by carriers against people with disabilities in all aspects of air transportation services. Air carriers are responsible for airport facilities or services that they “own, lease, operate, or otherwise control” and for provision of nondiscriminatory service with respect to seat assignments, stowage of personal equipment, boarding and deplaning, accommodations, service animals, etc. The original rulemaking process left a number of issues unresolved, however, and DOT has continued to revise and update the rule, having formally amended the rule ten times between 1990 and 2004.

The federal courts, in a series of cases, have acted to refine the extent of ACAA’s applicability. For example, in *Bower v. Federal Express Corp.*,³⁶ the Sixth Circuit held that ACAA applies to air-cargo carriers, just as it does to air-passenger carriers. And, in *Squire v. United Airlines*,³⁷ the Tenth Circuit concluded that ACAA’s protections do not apply to airline employees. For the general disability community, however, the more significant decisions have been those recent ones that have denied private litigants the right to seek enforcement or remedy under ACAA.

The text of ACAA does not expressly provide a private right of action that allows an individual to sue air carriers for enforcement of its provisions. It has been observed, however, that at the times Congress enacted and amended ACAA, it had adequate reason to presume that an implied private right of action was available under the statute.³⁸ And, for more than a decade following its enactment, courts based their decisions on much the same presumption.³⁹

The Supreme Court’s 2001 opinion in *Alexander v. Sandoval*,⁴⁰ which represented a sea change for enforcement of civil-rights laws in general, removed the presumption of an implied right of action under ACAA that Congress or the courts may have held. The Court, emphasizing reliance on the text and structure of statutes, asserted that “private rights of action to enforce federal law must be created by Congress” and that “remedies available are those that Congress enacted into law.” Consistent with the Court’s analysis, subsequent decisions by the Eleventh Circuit in *Love v. Delta Airlines*⁴¹ and by the Tenth Circuit in *Boswell v. Skywest Airlines*⁴² held that no private right of action (expressed or implied) exists under ACAA. Given this circumstance, NCD has recommended that Congress amend ACAA to provide an explicit private right of action and corresponding remedies at law and in equity.⁴³

Apart from advising an airline complaints resolution official (CRO) of a problem (in accord with ACAA Part 382.65), the only option remaining for an air traveler with a disability to seek redress, particularly from within the Tenth and Eleventh Circuits, is to file an administrative complaint with DOT’s Aviation Consumer Protection Division. In recent times, a number of such complaints have resulted in DOT levying substantial fines and/or ordering airlines to take corrective action.⁴⁴

These ACAA-based enforcement actions typically consist of DOT requiring a noncompliant airline to make a cash payment in the amount of the fine directly to the U.S. Treasury’s general fund, for which the Enforcement Office and the Department receive no credit. As part of the enforcement action, DOT may approve offset credits—these are not refunds—to the airline for implementing service improvements for passengers with disabilities that go above and beyond what is required under Part 382. For every offset credit granted, the carrier must implement the improvement and submit detailed supporting documentation within a specific time frame. DOT also requires sworn statements from the company officials responsible, certifying that the data submitted is true and correct and that the service improvement has been implemented.

In April 2000, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Air 21)⁴⁵ became law. The Act, which amended ACAA, makes ACAA's accessibility requirements applicable to foreign air carriers and strengthens DOT's ACAA enforcement. Prior to Air 21's enactment, DOT had addressed allegations of discrimination on the basis of disability involving foreign air carriers by invoking its general authority to prohibit unreasonable (i.e., egregious or unconscionable) discrimination by foreign air carriers.⁴⁶ It is anticipated that ACAA's implementing regulations under Part 382, which are pending, will be extended to foreign air carriers as appropriate, will be updated to take into account changes in airline operations and technology, and will be restructured for greater clarity.⁴⁷

ACAA Part 382.23, Airport Facilities,⁴⁸ specifies the elements to which the existing regulation applies. Self-service kiosk systems, though not expressly designated, clearly fall within the regulation's encompassing language. The regulation states: "This section applies to all terminal facilities and services owned, leased, or operated on any basis by an air carrier at a commercial service airport.... Air carriers shall ensure that the terminal facilities and services subject to this section shall be readily accessible to and usable by individuals with disabilities.... Air carriers shall be deemed to comply with this Air Carrier Access Act obligation if they meet requirements applying to places of public accommodation under Department of Justice (DOJ) regulations implementing Title III of the Americans with Disabilities Act (ADA).... The Americans with Disabilities Act Accessibility Guidelines (ADAAGs), including section 10.4 concerning airport facilities, shall be the standard for accessibility under this section. Contracts or leases between carriers and airport operators concerning the use of airport facilities shall set forth the respective responsibilities of the parties for the provision of accessible facilities and services to individuals with disabilities as required by this part for carriers and applicable section 504 and ADA rules of the Department of Transportation and Department of Justice for airport operators." This language thereby incorporates ADA Title III⁴⁹ and its standard for accessible design⁵⁰ into ACAA Part 382. In this regard, it is important to note that on December 2, 1996, ADAAG supplanted UFAS as ACAA's standard for accessible design.⁵¹

The ADA

The Americans with Disabilities Act of 1990 (ADA)⁵² is the best known and most comprehensive of the nation's disability-rights laws. ADA prohibits discrimination on the basis of disability and protects the rights of people with disabilities in programs, activities, and employment. Unlike Section 504, ADA's requirements apply whether or not the covered entity, public or private, receives federal financial assistance. In many instances, recipients of federal funding are bound by provisions of both Section 504 and ADA.

ADA Title II and its Part 35 regulations⁵³ extend to state and local governments the same basic nondiscrimination requirements contained in Section 504 of the Rehabilitation Act. Title II requires public entities and their instrumentalities to make their services, programs, and activities "readily accessible to and usable by individuals with disabilities."⁵⁴ This requirement applies, unless an entity can demonstrate—the entity has the burden of proof—that compliance would result in "a fundamental alteration in the program, service or activity or in an undue financial and administrative burden."⁵⁵ Part 35 also adopts both the Uniform Federal Accessibility Standards (UFAS)⁵⁶ and the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)⁵⁷ as Title II's standards for accessible design.⁵⁸

ADA Title III and its Part 36 regulations⁵⁹ extend to public accommodations and commercial facilities the same basic nondiscrimination requirements contained in Section 504 of the Rehabilitation Act. Title III requires private entities that own, operate, or lease places of public accommodation to afford people with disabilities full and equal enjoyment of "goods, services, facilities, privileges, advantages, or accommodations" available to other individuals and to do so in the "most integrated setting" appropriate to the needs of the individuals with disabilities.

Title III's requirements, which include removal of architectural and communication barriers in existing facilities and provision of auxiliary aids, apply, unless the covered entity demonstrates that a particular accommodation would not be "readily achievable."⁶⁰ Moreover, Section 36.401 implements ADA requirements for new construction and

alterations, and Section 303 (a)(1) provides that the definition of discrimination for purposes of Section 302(a) includes “a failure to design and construct facilities for first occupancy later than 30 months after the date of enactment (i.e., after January 26, 1993) that are readily accessible to and usable by individuals with disabilities.” Part 36 also adopts ADAAG⁶¹ as Title III’s standard for accessible design.

ADA’s statutory language exempts transportation “by aircraft”⁶² because the ACAA already covered air travel at the time the ADA was passed. However, airport terminals owned and operated by government entities are covered by Title II of the ADA,⁶³ and airport terminals open to the public are *commercial facilities* covered by Title III of the ADA.⁶⁴ Both are subject to ADA access requirements of ADAAG. Moreover, airport facilities operated by public entities are covered by ADA Title II and, if operated as part of a program receiving federal financial assistance, they are covered by Section 504 as well.⁶⁵

As already noted, ACAA Part 382.23’s “readily accessible to and usable by” airport facilities requirement designates ADA Title III’s Part 36 regulations and its ADAAG-based standard for accessible design as its own criteria for compliance. Consequently, the issue is not whether airlines and airports must comply with ADA’s Part 36 regulations and standard for accessible design—they must do so—but rather, what constitutes the means for enforcement.

Under the Air Carrier Access Act, DOT has since 1990 exercised its authority to propose, issue, and enforce regulations ensuring the rights of air travelers with disabilities. Everything contained in Part 382, including ADA’s Part 36 regulations and standard for accessible design, that is required of airlines and airport operators may be enforced by DOT through civil penalties (in the form of fines) and/or orders to take corrective action. Given that courts have held that ACAA enforcement falls exclusively under DOT’s purview,⁶⁶ in some instances plaintiffs have brought suit against airlines, albeit inconclusively, directly under provisions of ADA.

In *Sutton v. United Airlines, Inc.*,⁶⁷ plaintiffs sued an airline under ADA Title I for alleged employment discrimination. Although the Supreme Court affirmed the lower courts’

dismissal of an “ADA action for failure to state a claim upon which relief can be granted” (i.e., that the plaintiffs were in fact disabled), the applicability of the ADA to the air carrier was never at issue in the case.

In *Access Now v. Southwest Airlines Co.*,⁶⁸ plaintiffs sued an airline under ADA Title III for its alleged failure to make a place of public accommodation, Southwest’s Web site, accessible to individuals with disabilities. In dismissing the case, the district court held that Title III did not apply to Web sites, because (in the court’s reasoning) “a public accommodation must be a physical, concrete structure.” However, the issue of Title III’s applicability to an airline was never raised. On appeal,⁶⁹ the Eleventh Circuit acknowledged the authority issue but did not resolve it because the court, without affirming the district court’s decision, dismissed the case on procedural grounds.

The case of *Spector et al. v. Norwegian Cruise Line Ltd.*,⁷⁰ decided in 2005, may offer some insight into the Supreme Court’s take on the scope of ADA’s authority. Plaintiffs in the case brought suit against a cruise ship operator for alleged discrimination on the basis of disability, claiming coverage under ADA Title III’s “places of public accommodation” and “specified public transportation services” provisions. Both provisions require private entities to make “reasonable modifications in policies, practices, or procedures” to accommodate individuals with disabilities and require removal of “architectural barriers and communication barriers that are structural in nature” where removal is “readily achievable.” The district court affirmed the plaintiffs’ claims under Title III, with the exception of the architectural barriers claim (because standards for cruise ships had not yet been promulgated). On appeal, the Fifth Circuit, reasoning that Title III does not contain a specific provision mandating its application to foreign-flag vessels, sustained the district court’s dismissal of the barrier-removal claims on this alternative ground and reversed the court on the remaining Title III claims. The appeals court thus dismissed the case for failure to state a claim.

The Supreme Court, in the course of reversing the appeals court and remanding the *Spector* case, made the following observation: “Cruise ships flying foreign flags of convenience offer

public accommodations and transportation services to over 7 million United States residents annually, departing from and returning to ports located in the United States. Large numbers of disabled individuals, many of whom have mobility impairments that make other kinds of vacation travel difficult, take advantage of these cruises or would like to do so. To hold there is no Title III protection for disabled persons who seek to use the amenities of foreign cruise ships would be a harsh and unexpected interpretation of a statute designed to provide broad protection for the disabled. The clear statement rule adopted by the Court of Appeals for the Fifth Circuit, moreover, would imply that other general federal statutes—including, for example, Title II of the Civil Rights Act of 1964 [citation omitted]—would not apply aboard foreign cruise ships in United States waters. A clear statement rule with this sweeping application is unlikely to reflect congressional intent.”⁷¹ Although some lower courts have ventured opinions with respect to air carriers,⁷² the Supreme Court has not considered the matter.

Accessibility Realities

To date, no airline-kiosk vendor serving the U.S. market has included accessibility among its product features. Looking worldwide, one vendor’s product⁷³ that “caters to the needs of disabled passengers” provides a cautionary note for developing accessible airline kiosk systems. This product is an information kiosk rather than a true ticketing kiosk. And, its design appears to be little more than an overseas marketer’s intuitive grasp of features that might prove useful to some—but by no means most—individuals with disabilities. Any kiosk purchaser seeking to address accessibility requirements by deploying a comparably designed nonstandard product in the U.S. would be remiss. Such a product would fail to meet the full range of needs of people with disabilities and would disregard established accessibility technology⁷⁴ and design standards.

The applicable design standards are the ADA Accessibility Guidelines,⁷⁵ which provide the standards under both Title II and Title III of the ADA, and the Electronic and Information Technology Accessibility Standard issued under Section 508 of the Rehabilitation Act.⁷⁶ The latter grew out of Congress’ 1998 Amendment of the Rehabilitation Act to require federal

agencies to procure accessible electronic and information technology. Subpart B of the Section 508 Standard, issued by the Access Board in 2001, contains Section 1194.25, which provides technical specifications for accessible self-contained closed products that include, but are not limited to, “information kiosks and information transaction machines... and other similar types of products.”

The reality is that technology and standards directly applicable to design of fully accessible⁷⁷ self-service kiosk systems for the U.S. market already exist. Access technology developed by the Trace Research and Development Center,⁷⁸ in combination with design standards published by the U.S. Access Board, have led directly to design and production of a number of fully accessible kiosk products that are now used routinely by people with disabilities. These products include bank ATMs⁷⁹ and postal kiosks as well as the Passenger Information Paging System (PIPS)⁸⁰ at Phoenix’s Sky Harbor Airport and the information kiosks at the World War II Memorial on the Mall in Washington. All of these products, incorporating the principles of universal design,⁸¹ enable people with or without disabilities to use the devices’ various features.

Kiosk vendors⁸² confirm that they foresee no significant technical obstacles to development and deployment—using existing access technology—of fully accessible airline kiosk systems. Vendors also agree that their design work on such systems would be aided by adoption of a consistent technical standard that would also serve to protect them from nonstandard products marketed by “low ball” competitors. Vendors decline to estimate the costs either of developing the new systems or of retrofitting the existing ones, but they agree that the hardware costs (i.e., circuit boards, keypads, audio jacks) are negligible. The “real costs,” as they put it, are in the software reprogramming necessary to utilize the features of an accessible hardware interface.

One of the leading authorities on accessibility technology⁸³ provides a cost estimate for cross-disability accessibility in terms of a percentage of the overall cost of an airline kiosk system. Dr. Gregg Vanderheiden, Director of the Trace Research and Development Center at the University of Wisconsin–Madison, estimates that the costs of access hardware and

software modifications for a fully accessible system “would not exceed one percent, at most two percent, of a kiosk system’s—hardware and software development—entire cost.” This estimate is based on use of existing access technology (i.e., EZ Access) and design standards.

In illustration, the Allegheny County Airport Authority recently announced plans for installation of a common-use kiosk system at Pittsburgh International Airport.⁸⁴ The Airport Authority “approved paying ARINC of Annapolis, Md., up to \$1.5 million in the next two years for the kiosks and other changes involving management of airline gates.... The authority plans eight kiosks at the airport and more in area hotels and the David L. Lawrence Convention Center in downtown Pittsburgh.” If Dr. Vanderheiden’s cost estimate is applied to this published figure (which appears to include some costs other than the kiosk system itself), modifications to make the system fully accessible would cost approximately an additional 15 to 30 thousand dollars.

Kiosk systems, as a key component of the airline industry’s IT-based customer self-service business model, have been in use at least since 1996.⁸⁵ Why, then, have vendors not produced and airlines not adopted fully accessible kiosk technology to serve passengers with disabilities? For vendors, the reason is evident—the airline industry has yet to acknowledge the need for such products and, thereby, a market for vendors.

The airline industry’s justification for ignoring the need for fully accessible kiosk systems is captured in the 2005 Comments of the Air Transport Association (ATA)⁸⁶ made in response to the Department of Transportation’s November 2004 Nondiscrimination on the Basis of Disability in Air Travel Notice of Proposed Rulemaking.⁸⁷ ATA’s full statement regarding kiosk accessibility is as follows:

“The Department should not include in the final rule accessibility requirements for electronic ticketing kiosks. The functionality of this relatively new technology is still maturing, and it would be inappropriate for the Department to adopt standards at this time. Also, as discussed below, another process for addressing this issue is currently underway. In August 2004, ATA and several of its members met with an airline ticketing kiosk work group, which included,

among others, the American Council of the Blind, the National Federation of the Blind, the American Association of People with Disabilities, the National Council of [sic] Disability, and the Paralyzed Veterans of America. The purpose of the meeting, for both the airlines and the disability organizations, was to better understand the role of kiosks in today's air travel market and the accessibility obstacles for people with visual, mobility, and tactile disabilities. This meeting was very successful, and, in ATA's view, it is in the public's interest for this cooperative effort to proceed and develop non-regulatory solutions to any obstacles to accessibility for electronic ticketing kiosks. Moreover, as long as airline personnel are available to assist a passenger with a disability in accomplishing kiosk ticketing and check-in processes, such kiosks should be considered accessible.”⁸⁸

ATA's mention of “this relatively new technology” is unclear as to which technology reference is being made, kiosk systems themselves or accessibility technology applicable to such systems. And, ATA's characterization of the “functionality” of either technology as “still maturing” seems out of touch with an era in which the state of technology, especially in the fields of interactive transaction machines and universal design,⁸⁹ is well advanced. Air travelers using self-service kiosks now number in the tens of millions,⁹⁰ and consumers with diverse disabilities have become conversant in using all forms of electronic technology—cell phones, personal computers, the Web, ATMs, passenger paging systems, postal kiosks, voting machines, and more—to which they have gained access. In view of these facts, ATA's assertion that “it would be inappropriate for the Department to adopt standards at this time” is insupportable.

ATA also refers to its participation in an “airline ticketing kiosk work group” in order to “better understand the role of kiosks in today's air travel market and the accessibility obstacles for people with visual, mobility, and tactile disabilities.” The role of kiosks in the market⁹¹ and the obstacles to kiosk accessibility,⁹² were well known and had been documented long before the working group first assembled. Further discussion seems unlikely to add anything substantive on these topics and does not substitute for tangible steps toward making self-service kiosk systems and other IT-based customer services fully accessible.

ATA's comments go on to suggest that "it is in the public's interest for this cooperative effort to proceed and develop non-regulatory solutions to any obstacles to accessibility for electronic ticketing kiosks." ATA has provided no rationale as to why "non-regulatory solutions" serve the public's or, especially, the disability community's interests.

Finally, ATA asserts that "as long as airline personnel are available to assist a passenger with a disability in accomplishing kiosk ticketing and check-in processes, such kiosks should be considered accessible." In that one of the airline industry's intended effects from introducing the self-service business model is reduction or redirection of customer-service personnel, it seems reasonable to question how readily available airline personnel will remain even for travelers with disabilities who do require attention or assistance. Airlines have undiminished obligations to provide direct help to such passengers, when requested,⁹³ but also to offer travelers with disabilities the benefits and convenience of service available to other travelers.

The industry's continuing insistence on a no-tech approach for access to its high-tech customer-service systems fails to acknowledge the individual differences and preferences among people with disabilities and unnecessarily excludes them from the advantages enjoyed by other air travelers. Moreover, the industry's approach to this issue denies travelers with disabilities their rights under regulation and law to function independently, and it ignores their legitimate concerns about privacy—does any traveler these days want to be forced to share travel plans, hand over a credit card, or disclose his/her PIN number?

In contrast with ATA's above expression of the industry's views, under various regulations and laws reviewed herein, air carriers and in many instances airport authorities are required and are overdue to make their self-service kiosk systems fully accessible to people with disabilities. Under ACAA's Part 382.7(c) nondiscrimination requirements, for example, an individual air carrier's—not an industry's—only legitimate basis for withholding action on the kiosk issue would be a determination by DOT that compliance "would constitute an undue burden or would fundamentally alter their program." In making such a defense, an

airline has the burden of proof, and, in making its determination, the Department has five factors⁹⁴ it considers:

1. The nature and cost of the action needed under this part;
2. The overall financial resources of the site or sites involved in the action, the number of persons employed at the site, the effect on expenses and resources, legitimate safety requirements that are necessary for safe operation including crime prevention measures, or the impact otherwise of the action upon the operation of the site;
3. The geographic separateness, and the administration or fiscal relationship of the site or sites in question to any parent corporation or entity;
4. If applicable, the overall financial resources of any parent corporation or entity, the overall size of the parent corporation or entity with respect to the number of its employees, the number, type, and location of its facilities;
5. If applicable, the type of operation or operations of any parent corporation or entity, including the composition, structure, and functions of the workforce of the parent corporation or entity.

Although air carriers may share certain characteristics and interests with respect to these determination factors, an industry-wide “one size fits all” characterization of the industry’s capacity to make self-service kiosks fully accessible is not defensible. This is an airline-by-airline determination that should examine the unique circumstances of each covered carrier against a consistent DOT compliance standard. The fact that an individual carrier may be able to demonstrate that it currently lacks resources to comply with a fully accessible kiosk requirement has no bearing on the compliance obligations of other carriers.

As noted above, state and local airport authorities that own, operate, or lease kiosk systems are obligated to make the systems fully accessible to individuals with disabilities. This obligation extends to authorities that own, operate, or lease kiosk devices located at sites apart from airports (e.g., hotel lobbies, convention centers, shopping malls). An authority raising an undue-burden or fundamental-alteration defense under various applicable

regulations and laws would have the same burden of proof as air carriers (based on the five determination factors listed above).

The Industry

For those reviewing an individual air carrier's capacity to meet its obligations to its passengers with disabilities, the context provided by carriers' shared background in the air-travel business may be of interest. Historically, the Federal Government encouraged commercial aviation from the industry's beginning in the 1920s by providing contracts to carry the U.S. Mail and by allowing technologies developed for military aviation to be spun off for civilian application. The government also fostered the tightly-regulated industry's growth by subsidizing airport development and by creating a nation-wide air-traffic control system.

The premise behind the government's deregulation of routes and fare structures that began with the Airline Deregulation Act of 1978⁹⁵ was that the industry would be aided by allowing market forces to flourish. As the theory held, competition in the deregulated aviation industry would maximize resource allocation and would promote good customer service all on its own.

Despite government assistance and deregulation, the air-travel industry as a whole has never shown sustained profitability. In recent times, several of the so-called legacy air carriers (e.g., American, Delta, United) have experienced financial difficulty (exacerbated by the events of September 11), and some have filed for Chapter 11 bankruptcy protection. Nonetheless, a few low-cost carriers (e.g., Southwest, JetBlue), employing nontraditional airline business models, have demonstrated that profitability is possible.⁹⁶

Air carriers traditionally placed a premium on the routes that government regulators authorized them to fly. Development of airport "hubs" increased carriers' flexibility by providing them the means to transfer passengers between connecting flights and on to smaller (often carrier-owned) "feeder" airlines.

Most carriers, until recently, provided multi-tier service, concentrating on the full-fare business traveler. Discounted fares were employed largely as a device for filling empty seats in coach class. Of late, carriers' strategy for keeping seats full has been simply to reduce the number of available flights. The nontraditional and apparently successful low-cost model cited above relies on a single level of service and minimizes fare discounts.

Airlines have increased seating capacity and, presumably, their profits by reducing legroom aboard aircraft.⁹⁷ Also, airlines have reduced or eliminated many in-flight amenities (e.g., meals, pillows) and have begun to charge for others (e.g., beverages, snacks). Southwest, for one, substitutes good-humored personnel for just about everything else.

The introduction of the electronic ticket or "e-ticket," steadily replacing paper tickets since the mid-1990s, has enabled carriers to reduce costs and increase efficiency. E-tickets may be purchased with a credit card over the phone, on the Web, or at a self-service kiosk. Increasingly, no direct contact between air travelers and airline personnel is required. The industry, at least in the U.S. market, expects to eliminate paper tickets entirely by 2007.

The Web's e-commerce capabilities, which also have evolved since the mid-1990s, have greatly enhanced air carriers' service to their customers. Via the Web, air travelers are now able to research flight and fare options, make reservations and purchase tickets, obtain itineraries and boarding passes, monitor flight progress and weather conditions, consult carrier rules and regulations, and arrange for ground transportation.

Self-service kiosk systems benefit passengers as well as airlines and airport operators. For passengers, kiosks offer fast and simple check-ins—the entire transaction can take place in as little as 30 seconds. For airlines, kiosks reduce customer-handling costs and increase customer satisfaction. And, for airports, kiosks reduce congestion and save floor space in terminals. Much like carriers' Web sites, kiosks can provide air travelers access to other airline and airport systems, including arrival and departure information, weather forecasts, and business directories and advertisements.

In addition to pushing the envelope of the self-service business model, the air-travel industry is currently focusing on equipment, fuel, and labor costs. More capacious, reliable, and fuel-efficient aircraft, maintained and operated by personnel who are more modestly compensated, is the industry's goal. Relatively less attention is being paid by carriers to the fundamentals of attracting and keeping paying customers.⁹⁸

Air travelers in general are expressing increased frustration and dissatisfaction with all aspects of air carrier performance (e.g., lost baggage, flight cancellations, late arrivals and departures)⁹⁹ and are seeking legal remedies and guarantees of passenger rights through federal legislation. "Unfortunately, passengers probably have no contractual or tortious recourse against the airlines or their employees. Since the Deregulation Act's enactment in 1978, passengers bringing state law claims based on tort and contract law have often found their claims to be preempted. Moreover, these unsuccessful plaintiffs lack any real federal remedy under the [Airline Deregulation Act]."¹⁰⁰

At this watershed moment for the industry, IT has shown potential to enhance both passenger satisfaction and airline profitability. Within this context, the industry might consider IT's impact on a market segment that contributes increasingly to air travel's bottom line. In 2003, the Travel Industry Association of America, the Open Door Organization, and the Society for Accessible Travel and Hospitality together released the results of a Harris Interactive Survey that examined the vacation habits of people with disabilities.¹⁰¹ The Survey found that people with disabilities spend over 13 billion dollars each year on travel. As a result of demographic trends combining with travel-industry initiatives, this market will only expand. Because of aging baby-boomers, people with disabilities will constitute as much as 24 percent of the U.S. population by the year 2030. And, as the evidence already suggests, this group is drawn especially to the convenience of cruise-ship vacations and, necessarily, to connecting air transportation.

Case Study

When stakeholders evaluate the legal and technical factors bearing on airline decisions to adopt fully accessible kiosk systems, attorney Lainey Feingold's two-part chronicle of the banking industry's experience with accessible "talking" ATMs is instructive.¹⁰² ATM systems had been in place industry-wide and applicable access technology had been available long before the first talking ATMs—fully accessible machines that incorporate audio output for customers who are blind—were introduced in the late 1990s. But, as recently as 1999 and 2000, banking industry representatives had testified to governmental agencies that talking ATMs would be "prohibitively expensive, if not technically infeasible."¹⁰³ The reality that by 2003, banks across 30 states had already installed over three thousand such machines and that Bank of America alone had committed to installing seven thousand machines by 2005, came to belie the industry's earlier apprehensions.

The remarkable fact is that the banking industry joined in the accessible-ATM effort without having been brought into court. Although litigation can be useful, the process is often tortuous as well as counter to eliciting timely cooperation. As Feingold observes: "Lawsuits can cause people to dig in their heels and inherently set up roadblocks to real communication. ...their use must be carefully considered when technology is involved."¹⁰⁴ The reality is that technological advances can by far outpace legal ones.

The rapid expansion of ATM technology, paralleling in many respects the growth of airline kiosk technology, elicited a concomitant demand within the disability community to gain access to the ubiquitous machines' benefits. Had this expectation been pursued through litigation, ATM access might well have been delayed, and valuable collaboration among ATM vendors, banks' business and technical personnel, and consumers with disabilities would have been strained, if not altogether precluded. Fortunately for all those affected, attorneys representing the disability community's interests developed a creative approach.

The legal requirement for accessible ATMs derives from the Americans with Disabilities Act and from ADA's standard for accessible design incorporated into the Act's Part 36 regulation.¹⁰⁵ This enforceable ADAAG-based standard, which was adopted by the Department of Justice in 1991, includes requirements for making ATMs cross-disability

accessible (Section 4.34) and applies these same requirements (Section 4.34) to automatic fare vending, collection and adjustment systems.

Section 4.34.5 states that “instructions and all information for use shall be made accessible to, and independently usable by, persons with vision impairments.”¹⁰⁶ But as Feingold points out, “instructions and all information on an ATM cannot be ‘independently usable’ unless there is audible output, coupled with the features such as tactile controls and clearly scripted orientations.”¹⁰⁷

In 2004, the U.S. Access Board published combined Americans with Disabilities Act/Architectural Barriers Act guidelines that are pending adoption by DOJ as an enforceable standard.¹⁰⁸ The new guidelines, much as the original ones but using different numbering, include requirements for making ATMs cross-disability accessible (Section 707) and apply these same requirements (Section 707) to “self-service fare vending, collection, or adjustment machines.”¹⁰⁹

The new guidelines require that the covered machines be “speech enabled” (Section 707.5) and that “Operating instructions and orientation, visible transaction prompts, user input verification, error messages, and all displayed information for full use shall be accessible to and independently usable by individuals with vision impairments.”¹¹⁰ The requirements are considerably more specific and technical than those in the original ADAAG-based Standard. For example: “Speech shall be delivered through a mechanism that is readily available to all users, including but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized.... Audible tones shall be permitted instead of speech for visible output that is not displayed for security purposes, including but not limited to, asterisks representing personal identification numbers.... If an ATM provides additional functions such as dispensing coupons, selling theater tickets, or providing copies of monthly statements, all such functions must be available to customers using speech output.... Speech shall be capable of being repeated or interrupted.”¹¹¹

For Feingold, there was no question that ADA and its enforceable standard for accessible design mandated fully accessible ATMs. By the late 1990s, most banks still were without fully accessible ATMs and were in clear violation of ADA Title III. Against the backdrop of pressure on the banking industry from disability-rights advocates, Feingold and her co-counsel, Linda Gargarian, began a methodical effort that, by 2005, had worked out agreements with many of the country's largest banks to install fully accessible ATMs.

The key to Feingold's and Gargarian's success was a method they pioneered in their work with the banking industry. As Feingold describes it: "...we have used a method we have termed 'structured negotiations' to emphasize the formal and serious nature of the negotiations, which include elements such as written demands and the use of lawyers and legal authority. A key component of this method is the willingness and ability to file a formal lawsuit should the negotiations be unsuccessful. This system of structured negotiations has resulted in talking ATM agreements with Bank of America, Wells Fargo, Citibank, First Union/Wachovia, Fleet, Bank One, Washington Mutual, Sovereign Bank, and Union Bank of California. Other agreements are in the works."¹¹²

Dr. Vanderheiden of the Trace Center¹¹³ played a pivotal role in the ATM initiative, working with consumer groups and a number of banks and ATM manufacturers over a period of years. In 2000, he met with a group of technical representatives from the banking industry who had assembled in D.C. to address the ATM issue. He conducted a one-day technical briefing for the group, explaining the various accessibility issues and implementation options, and then moderated a one-day discussion between industry and consumer groups. He recounts an "Aha" moment, when one of the meeting's lead industry participants realized how to make even small, non-PC-based ATMs accessible. Within the next year, this same individual proceeded to build access into his company's ATM line.

Lessons Learned

Parallels between the banking and air-travel industries relating to adoption of fully accessible technology are all too apparent. Large, brand-name, highly regulated enterprises serving their

customers through established self-service technology systems may, in possible violation of law, have denied some of their customers access to, and thereby full and equal enjoyment of, goods and services. And, both industries have raised similar defenses for their inaction—“prohibitively expensive, if not technically infeasible.”

Differences between the banking and air-travel industries also exist. Fully accessible ATM systems, for example, may not constitute an exact model for fully accessible airline kiosk systems. Making any form of IT fully accessible is a technological matter that requires exchanges among technically conversant people representing vendors, industry, and accessibility research and design (R&D). Such people are in the best position to assess technical and cost feasibility with adequate rigor and objectivity.

Recommendations

The National Council on Disability, after a careful examination of the technological and legal issues, concludes that U.S. air carriers and airports have obligations under federal accessibility laws and regulations to provide cross-disability access to their passenger self-service kiosk systems and that U.S. air carriers and airports operating passenger self-service kiosks not in conformity with ADA’s standard for accessible design, which is also ACAA’s standard for accessible design, are out of compliance with current law and regulation.

The National Council on Disability recommends that the Department of Transportation incorporate the relevant ADA design standards or the Section 508 Standard into an updated ACAA standard for accessible design applicable to both proprietary (dedicated) and common-use self-service kiosk systems and that the Department of Transportation then initiate settlement negotiations with covered air carriers and airports to bring their kiosk systems into full compliance.

Acknowledgment

The National Council on Disability wishes to express its appreciation to James A. Ansley, Ph.D., for drafting this document.

Endnotes

¹ The Zen of Airport Kiosks, by Michael Schrage, Technology Review Magazine (January 2005).

² Comments of the Air Transport Association of America in response to the Department's Notice of Proposed Rulemaking Concerning Nondiscrimination on the Basis of Disability in Air Travel (Docket No. OST-2004-19482).

³ Amicus Brief of the Air Transport Association of America, filed in the Eleventh Circuit in the case of *Access Now, Inc. v. Southwest Airlines Co.* 385 F. 3d 1324 (11th Cir. 2004).

⁴ U.S. Moves to Aid Disabled Who Fly, by Matthew L. Wald, The New York Times (October 26, 2003).

⁵ Enforcing the Civil Rights of Air Travelers with Disabilities: Recommendations for the Department of Transportation and Congress, National Council on Disability (February 26, 1999).

⁶ *Id.*

⁷ Air Carrier Access Act (ACAA), 49 U.S.C. Sec. 41705 et seq. (1986).

⁸ Position Paper on Amending the Air Carrier Access Act to Allow for Private Right of Action, National Council on Disability (July 8, 2004).

⁹ As a matter of practicality as well as principle, most air travelers with disabilities elect to negotiate airports as independently as possible. Nevertheless, some of these travelers may have individual needs that require attention or assistance from readily available airline personnel. Further, the airport environment itself (including security barriers, safety hazards, and complex layouts and traffic patterns) may, in some instances, preclude fully independent navigating by people with certain disabilities.

¹⁰ The Toll of a New Machine, by Charles Fishman, Fast Company Magazine, Issue 82 (May 2004).

¹¹ Airline IT Trends Survey 2005, SITA and Airline Business Magazine (September, 2005).

¹² Airport IT Trends Survey 2005, SITA and Airline Business Magazine (November, 2005).

¹³ Fishman, *supra* note 10.

¹⁴ Kinetics, a subsidiary of NCR Corporation, is a principal vendor of proprietary kiosk systems and reports holding approximately fifty percent of the worldwide market. ARINC Inc. is a principal vendor of common-use kiosk systems and has announced U.S. installations at LAS and PIT.

¹⁵ ARINC Inc. has announced the iMUSE Express ® product, which is a “portable check-in desk.” The product, which has no accessibility features, functions as a work station but is not considered by the vendor to be a full-fledged kiosk device.

¹⁶ Fishman, *supra* note 10.

¹⁷ The International Air Transport Association (IATA) has adopted a standard for common-use self-service (CUSS) kiosk systems only.

¹⁸ The European division of ARINC Inc. has announced the iFOSite ® product, which “caters to the needs of disabled passengers with a touch-screen interface and keyboard at wheelchair-accessible height, and the capability to display enlarged text on the screen.”

ARINC does not market this information-kiosk product in the U.S., and the company makes no claim that the product is cross-disability accessible or that it accommodates the needs of users who are blind.

¹⁹ Air Carrier Access Act (ACAA), 49 U.S.C. Sec. 41705 et seq. (1986).

²⁰ Federal Aviation Act (FA Act), 49 U.S.C. Sec. 1374 et seq. (1958).

²¹ National Council on Disability, *supra* note 5.

²² Air Transport Association of America, *supra* note 2.

²³ Rehabilitation Act, 29 U.S.C. Sec. 701 et seq. (1973).

²⁴ 47 F.R. 25936, 25948 (June 16, 1982).

²⁵ National Council on Disability, *supra* note 5.

²⁶ Civil Aeronautics Board Sunset Act, P.L. 98-443, 98 Stat. 1703 et seq. (1984).

²⁷ *Paralyzed Veterans of America v. CAB*, 243 U.S. App. D.C. 237, 752 F.2d 694 (1985).

²⁸ *Id.* (citing Airport and Airway Improvement Act, 49 U.S.C. App. 2201 et seq. (1982)).

²⁹ *Department of Transportation v. Paralyzed Veterans*, 477 U.S. 597 (1986).

³⁰ *Shotz v. American Airlines*, 323 F. Supp. 2d 1315 (S.D. Fla. 2004).

³¹ *Id.* (citing Air Transportation Safety and System Stabilization Act (Stabilization Act), P.L. 107-42, 115 Stat. 230 (2001)).

³² *Shotz v. American Airlines, Inc.*, 420 F.3d 1332 (11th Cir. 2005).

³³ Access to Airports by Individuals with Disabilities, Department of Transportation, Advisory Circular, 150/5360-14, (June 30, 1999).

³⁴ Air Carrier Access Act (ACAA), 49 U.S.C. Sec. 41705 et seq. (1986).

³⁵ Nondiscrimination on the Basis of Disability in Air Travel, 14 C.F.R. Part 382.

³⁶ *Bower v. Federal Express Corp.*, 96 F. 3d 200 (6th Cir. 1996).

³⁷ *Squire v. United Airlines Inc.*, 186 F. 3d 1301 (10th Cir. 1999).

³⁸ National Council on Disability, *supra* note 8.

³⁹ *Tallarico v. Trans World Airlines, Inc.*, 881 F.2d 566 (8th Cir. 1989).

⁴⁰ *Alexander v. Sandoval*, 532 U.S. 275 (2001).

⁴¹ *Love v. Delta Airlines*, 310 F.3d 1347 (11th Cir. 2002).

⁴² *Boswell v. Skywest Airlines Inc.*, 361 F.3d 1263 (10th Cir. 2004).

⁴³ National Council on Disability, *supra* note 8.

⁴⁴ U.S. Moves to Aid Disabled Who Fly, by Matthew L. Wald, *The New York Times* (October 26, 2003).

⁴⁵ Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Air 21), P.L. 106-181, 114 Stat. 61 (2000).

⁴⁶ General Nondiscrimination, 49 U.S.C. Sec. 41310(a).

⁴⁷ Nondiscrimination on the Basis of Disability in Air Travel; Notice of Proposed Rulemaking, 69 F.R. 64363-64395 (November 4, 2004).

⁴⁸ Nondiscrimination on the Basis of Disability in Air Travel, 14 C.F.R. Part 382.23.

⁴⁹ Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 28 C.F.R. Part 36.

⁵⁰ Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG), Appendix A 34 C.F.R. Part 36. Currently, this is an enforceable standard under ADA Titles II and III.

⁵¹ Department of Transportation, Advisory Circular, *supra* note 33.

⁵² Americans with Disabilities Act (ADA), 42 U.S.C. 12134 et seq. (1990).

⁵³ Nondiscrimination on the Basis of Disability in State and Local Government, 28 C.F.R. Part 35.

⁵⁴ The “readily accessible to and usable by” criterion has been employed throughout disability-rights legislation to convey an expectation of a high degree of convenient accessibility and to ensure that accessible facilities do not provide accessible elements without regard to their usability.

⁵⁵ The “undue burden” criterion means “significant difficulty or expense” and is more stringent than the “readily achievable” criterion.

⁵⁶ Uniform Federal Accessibility Standards (UFAS), Appendix A 41 C.F.R. Part 101-19.6. Currently, this is an enforceable standard under ADA Title II.

⁵⁷ 34 C.F.R. Part 36. *See also* note 50.

⁵⁸ ADA and ABA Accessibility Guidelines for Buildings and Facilities, 69 F.R. 44084 (July 23, 2004). The U.S Access Board issued these combined guidelines for new or altered facilities covered by the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA). The new guidelines are pending adoption by the Department of Justice as enforceable standards.

⁵⁹ 34 C.F.R. Part 36. *See also* note 50.

⁶⁰ The “readily achievable” criterion means “easily accomplishable without much difficulty or expense” and is less stringent than the “undue burden” criterion.

⁶¹ 34 C.F.R. Part 36. *See also* note 50.

⁶² 42 U.S.C. 12141

⁶³ 28 C.F.R. Part 35 Appendix A

⁶⁴ 28 C.F.R. 36104

⁶⁵ Department of Transportation, Advisory Circular, *supra* note 33.

⁶⁶ National Council on Disability, *supra* note 8.

⁶⁷ *Sutton v. United Airlines, Inc.* (97-1943) 527 U.S. 471 (1999).

⁶⁸ *Access Now v. Southwest Airlines Co.*, 227 F. Supp. 2d 1312 (S.D. Fla. 2002).

⁶⁹ *Access Now v. Southwest Airlines Co.*, 385 F. 3d 1324 (11th Cir. 2004).

⁷⁰ *Spector v. Norwegian Cruise Line Ltd.*, 545 U.S. 119 (2005).

⁷¹ *Id.*

⁷² *See, e.g., Access Now*, 385 F. 3d at 1324.

⁷³ The European division of ARINC Inc. has announced the iNFOsite ® product, which “caters to the needs of disabled passengers with a touch-screen interface and keyboard at wheelchair-accessible height, and the capability to display enlarged text on the screen.” ARINC does not market this information-kiosk product in the U.S., and the company makes no claim that the product is cross-disability accessible or that it accommodates the needs of users who are blind.

⁷⁴ EZ Access FAQs, Trace Research and Development Center, University of Wisconsin–Madison (May 6, 2004).

⁷⁵ 34 C.F.R. Part 36. *See also* note 50.

⁷⁶ Electronic and Information Technology Accessibility Standard (pursuant to Section 508 of the Rehabilitation Act Amendments of 1998), 36 C.F.R. Part 1194.25.

⁷⁷ The terms “fully accessible” and “cross-disability accessible” are used interchangeably to indicate incorporation of accessibility features that permit independent use by individuals with any of the variety of disabilities covered under applicable legislation. These terms are also meant to convey consistency with the “readily accessible to and usable by” criterion.

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- ⁷⁸ EZ Access FAQs, *supra* note 74.
- ⁷⁹ You Can Bank On It, by Lainey Feingold: Features, Technology, and Locations of Talking ATMs, Access World (January 2003).
- ⁸⁰ ARINC Inc. developed the Passenger Information Paging System (PIPS) product deployed at Phoenix's Sky Harbor Airport. The system, which employs EZ Access Technology, is cross-disability accessible.
- ⁸¹ The Principles of Universal Design: Version 2.0, by B. R. Connell, M. Jones, R. Mace, J. Mueller, A. Mullick, E. Ostroff, J. Sanford, E. Steinfeld, M. Story, and G. Vanderheiden., Raleigh: North Carolina State University, The Center for Universal Design (1996).
- ⁸² Technical representatives from two of the principal airline kiosk vendors were interviewed by phone during January, 2006.
- ⁸³ Dr. Gregg Vanderheiden, Director of the Trace Research and Development Center, was interviewed by phone during January, 2006.
- ⁸⁴ Pittsburgh Airport to Install Universal Check-In Kiosks, USA Today (February 13, 2006).
- ⁸⁵ Fishman, *supra* note 10.
- ⁸⁶ Air Transport Association of America, *supra* note 2.
- ⁸⁷ Nondiscrimination on the Basis of Disability in Air Travel; Notice of Proposed Rule Making, 69 F.R. 64363-64395 (November 4, 2004).
- ⁸⁸ Air Transport Association of America, *supra* note 2.
- ⁸⁹ Connell, et. al., *supra* note 81.
- ⁹⁰ Fishman, *supra* note 10.
- ⁹¹ *Id.*
- ⁹² User Needs, and Strategies for Addressing Those Needs, Trace Research and Development Center, University of Wisconsin–Madison (1998).
- ⁹³ As a matter of practicality as well as principle, most air travelers with disabilities elect to negotiate airports as independently as possible. Nevertheless, some of these travelers may have individual needs that require attention or assistance from readily available airline personnel. Further, the airport environment itself (including security barriers, safety hazards, and complex layouts and traffic patterns) may, in some instances, preclude fully independent navigating by people with certain disabilities.
- ⁹⁴ Department of Transportation, Advisory Circular, *supra* note 33.
- ⁹⁵ Airline Deregulation Act (ADA), P.L. 95-504, 92 Stat. 1705 (1978).
- ⁹⁶ Why Air Fares Stay So Low While Airlines Struggle, by Alexandra Marks, The Christian Science Monitor (February 9, 2006).
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- ⁹⁸ See, Still Loyal to Your Airline? You Must Be Looney Tunes, by Joe Sharkey, The New York Times (March 21, 2006); A Move to Add Still More Fine Print to Advertised Air Fares, by Jeff Bailey and Christopher Elliott, The New York Times (February 25, 2006).
- ⁹⁹ Flying in a Snit, by Jane L. Levere, The New York Times (January 24, 2006).
- ¹⁰⁰ Legal Turbulence: The Court's Misconstrual of the Airline Deregulation Act's Preemption Clause and the Effect on Passengers' Rights, by Daniel H. Rosenthal, 51 Duke L. J. 1857 (2002).
- ¹⁰¹ Vacationing with Disabilities: New Travel Market Is Opening Up on the Road, by Deborah Alexander, Omaha World Herald (May 23, 2003).

¹⁰² You Can Bank On It, by Lainey Feingold: Features, Technology, and Locations of Talking ATMs, Access World (January 2003); You Can Bank on It, Part 2: Advocacy, Outreach, and Legal Authority for Talking ATMs, by Lainey Feingold, Access World (March 2003).

¹⁰³ You Can Bank on It, Part 2: Advocacy, Outreach, and Legal Authority for Talking ATMs, by Lainey Feingold, Access World (March 2003).

¹⁰⁴ *Id.*

¹⁰⁵ 34 C.F.R. Part 36. *See also* note 50.

¹⁰⁶ *Id.*

¹⁰⁷ Feingold, *supra* note 103.

¹⁰⁸ ADA and ABA Accessibility Guidelines for Buildings and Facilities, 69 F.R. 44084 (July 23, 2004). The U.S Access Board issued these combined guidelines for new or altered facilities covered by the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA). The new guidelines are pending adoption by the Department of Justice as enforceable standards.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² Feingold, *supra* note 103.

¹¹³ Dr. Gregg Vanderheiden, Director of the Trace Research and Development Center, was interviewed by phone during January, 2006.