



November 17, 2022

Ms. Taryn Williams
Chair
U.S. Access Board
1331 F Street, NW, Suite 1000
Washington, DC 20004

Re: Docket Number ATBCB-2022-0004

Dear Ms. Williams:

Thank you for the opportunity to submit these comments in response to the Access Board's Advance Notice of Proposed Rulemaking related to new accessibility guidelines for self-service transaction machines (SSTM). Given NCR's expertise in the development of self-service technologies and our longstanding commitment to accessibility, we appreciate your consideration of our views and concerns.

Introduction to NCR:

NCR Corporation is a leader in transforming, connecting and running technology platforms for self-directed banking, stores and restaurants. Our platforms help retailers and restaurants run their entire operation. We also offer industry-leading digital banking and ATM systems. NCR is the leading global provider of point-of-sale and ATM systems. We are headquartered in Atlanta, Georgia, with 38,000 employees globally.

NCR is also a leader in accessibility. Our ATMs have met or exceeded accessibility standards for years. As noted in your ANPRM, we demonstrated our innovative "universal navigator" accessibility interface for the Access Board last year, and we have met with Access Board officials several times to discuss current accessibility issues. At NCR, we welcome the establishment of accessibility standards that improve the lives of people with disabilities and promote technology innovation. Achieving both of these goals in the rapidly evolving technology sector is sometimes challenging. We look forward to continuing to collaborate with the Access Board in this area.



Executive Summary:

- The Access Board should modernize its ATM standard before proceeding to develop a new standard for Self Service Transaction Machines (SSTMs). The ATM standard is nearly 20 years old, and technology standards must keep pace with innovation.
- The Access Board should replace the ATM standard's prescriptive requirement for a tactilely discernable numeric keypad with a performance-based requirement that each operable part of an ATM be discernable without vision or hearing.
- In developing a new standard for SSTMs, the Access Board should recognize the wide range and complexity of these platforms. Many SSTMs are not single closed systems, but bundles of separate systems that operate in sequence and conform to different standards.
- Customers using SSTMs often require staff assistance. Privacy features for users with disabilities, such as blank screens, should not interfere with the ability of staff to offer assistance.
- Instead of specifying a certain percentage of SSTMs at a single location that must be accessible, consider a more holistic requirement that each location that offers SSTMs have at least one accessible option for customers with disabilities. This would open the door to more innovative solutions that don't exist commercially today.
- Be cautious in implementing a requirement for contactless payments in SSTMs.

The ATM Standard as a Starting Point

In its ANPRM, the Access Board states that it will base its new standard for SSTMs partially on the existing ADA and ABA standard for ATMs, as well as relevant portions of the Section 508 standards. It also asks in Question 6 if the ATM standard should be revisited. We propose that the Access Board use this opportunity to modernize the ATM standard, either prior to developing an SSTM standard, or in parallel. We believe that replacing various technology specifications in the standard with more flexible functional performance statements would lead to innovations that will benefit everyone, including people with disabilities, for years to come.

The ADA standard for ATMs has been a great success. It has had unquestioned benefits for individuals with disabilities, opening up to them a range of financial services that were previously difficult to access. It also provided the banking industry and its technology providers a national standard to guide the development of accessibility features. However, as the standard approaches its twentieth anniversary, it is beginning to show its age. The technology sector evolves rapidly as new investments produce new



innovations. ATM features that were cutting edge in 2004 may now be outdated. As the Access Board prepares to expand its portfolio of standards for technology products, the Access Board should have a plan for periodically updating these standards.

One specific example from the ATM standard illustrates the need for regular updates to technology standards. The ATM standard requires a physical numerical keypad with tactilely discernible keys. We have shared our views previously with the Access Board that this requirement is out-of-date and has slowed the development of new ATM features that would benefit everyone, including people with disabilities. Today, millions of Americans conduct financial services activities through banking apps on their smart phones and tablets. These banking apps open up a world of convenience that did not previously exist. These same smart phones and tablets have powerful accessibility features that have been broadly adopted by people with visual impairments and other disabilities. This entire ecosystem did not exist when the original ATM accessibility standard was devised.

Today, banks would like to have a consistent banking experience across smart phone apps, tablets and ATMs. This type of consistency would benefit people with disabilities, as they would need to learn just one set of accessibility features across multiple devices. However, investment in the development of such a new generation of ATMs has been forestalled in part by the accessibility standard requiring a physical keypad. We have argued for replacing the prescriptive requirement for a physical keypad with a more flexible functional performance statement requiring that each operable part be discernable without vision or hearing. This would give ATM manufacturers the flexibility to design a new generation of ATMs that mirror features on banking apps already broadly in use by people with and without disabilities.

This is one example of why we believe it is important for the Access Board to modernize the ATM standard prior to using it as a model for a standard for SSTMs. Older technology standards tend to lock in older technologies at the expense of newer innovations.

Recognizing the Complexity of SSTMs:

As the Access Board begins to develop an accessibility standard for self-service transaction machines, it should recognize the wide range of SSTMs and kiosks that exists. In many cases, SSTMs are more complex than ATMs, and serve a wider variety of purposes. Developing a standard that is suited to this wide variety of kiosks will be challenging. This is one more reason that we urge the Access Board to rely more on functional performance statements or performance-based standards than on technology specifications.

For this discussion, we will use retail self-checkout systems as an example to illustrate the complexities of SSTMs. NCR is the global market leader in self-checkout systems, so we have a great deal of expertise in this area. Here we will focus on three aspects of self-checkouts that will present challenges – separated payment systems, height and reach requirements, and employee assistance capabilities.



Separable Payment Modules:

First, it is important to recognize that a self-checkout system is not one unified platform. Rather, it is a bundle of separate systems that operate in parallel. The section of the self-checkout that scans barcodes and tallies up a customer's purchases is separate from the module that collects payments. This is done for an important reason. The module that collects payments must meet a very stringent industry security standard that protects credit and debit card account data. This security standard is known as the Payment Card Industry Data Security Standard (PCI-DSS). Complying with the PCI-DSS is rigorous and costly. If the entire self-checkout system had to comply with this standard, the cost of building and operating it would be prohibitive.

An accessibility standard for SSTMs must recognize that they are not closed systems like ATMs. An SSTM standard may need to include separate requirements that meet the unique characteristics of each section of the SSTM. It may be advisable to develop separate standards for payment-processing components and non-payment processing components. Audio feedback is a case in point. Most information relayed by the payment system is sensitive and not appropriate for public vocalization. On the other hand, most information relayed by the scanning module of a self-checkout is not sensitive, and may be more appropriate for non-private audio. Separate standards for these different components would help clarify these issues.

At a minimum, the Access Board should ensure that an SSTM accessibility standard does not break down the bright line that divides the payment and non-payment portions of a self-checkout system. We will revisit this point later in these comments when discussing contactless payments.

Height and Reach Requirements:

Height and reach requirements for SSTMs will also be challenging. For ATMs, height and reach requirements are relatively straightforward, and have produced broad benefits for people with physical limitations. Similar requirements for SSTMs will be more difficult.

Again, we will use retail self-checkout systems as an illustration. Most ATMs have two primary components, a touchscreen and a cash dispenser. A self-checkout is a more complex bundle of components. A self-checkout system's touchscreen operates alongside numerous other components. These include a bar code scanner, a bar code scanning gun, a weighing device, a conveyer belt, and a bagging area with its own weighing scale. Configuring these components in a confined space in a manner that facilitates the flow of retail transactions is a delicate balancing act. Along the same lines, developing height and reach requirements for each of these functional components of a self-checkout without interfering with the workflow may require some trade-offs. For example, the availability of a bar code scanning gun might facilitate the scanning of purchases for people with height and reach limitations, but finding the proper configuration in relation to the other modules will not always be easy. We recommend

that the Access Board consult frequently with SSTM manufacturers as this process moves forward to ensure that height and reach requirements meet the needs of people with disabilities in the most efficient and effective manner.

Enabling Employee Assistance:

In retail environments, self-service transaction machines actually operate as assisted-service transaction machines in most cases. This is certainly true for self-checkout systems. Self-checkouts require employee intervention or assistance for a number of reasons. Assistance is sometimes required for legal reasons – age verification for alcohol sales. It is sometimes required for security purposes – a mismatch in items scanned and items placed in the bagging area. And it is sometimes required to fix routine processing issues – scanning errors, cash jams or replacing receipt paper.

Accessibility features for customers with disabilities should not prevent interventions by employees. For example, some accessibility standards require privacy features like blank screens for users with visual impairments when a headphone jack is employed. Any such privacy requirements must not prevent a store employee from logging into the system and providing customer assistance when required.

Requirements for Minimum Numbers of Accessible SSTMs:

In its ANPRM, the Access Board invites comments on whether it should require that all SSTMs at a given location comply with a new accessibility standard. For a variety of practical reasons, we believe it should not. Also, we believe that if the Access Board considers this matter more holistically, it may be able to craft a requirement that opens the door to more innovative solutions that will provide greater assistance to people with disabilities.

From a practical standpoint, SSTMs that meet height and reach requirements for individuals in wheelchairs are sometimes not convenient for standing shoppers who are tall. Because most retail locations that employ self-service checkouts offer multiple lanes, allowing for more than one type of SSTM would create the most usable options for a variety of shoppers.

From a more holistic standpoint, the Access Board may be able to provide a broader range of benefits to people with disabilities in shopping environments by shifting to a performance-based paradigm that focuses more on results. Instead of narrowly considering how many SSTMs at a given location must comply with certain specifications, the Access Board may want to consider performance-based requirements that will encourage more disruptive innovations.

An accessibility standard for SSTMs will help consumers with disabilities check out and pay for purchases at a self-checkout station. However, it will not help a shopper with visual impairments distinguish between one-percent milk and two-percent milk in the dairy section. And it will not help that same shopper locate a desired brand of cereal in an aisle with dozens of choices. Alternatively, a



performance-based standard that requires a retail location to have at least one accessibility option for customers with disabilities would encourage investment in more far-reaching solutions. It would allow retailers to meet the standard by offering smart carts or pay-as-you go solutions that would help customers with limitations identify items on store shelves, pay for them as they move about the store, and avoid a check-out station altogether.

At a minimum, we encourage the Access Board not to require 100 percent compliance with an accessibility standard for SSTMs at each location. More broadly, we ask the Access Board to consider reliance on performance-based requirements that would promote game-changing innovations for people with disabilities.

Contactless Payment Systems:

In Question 9, the Access Board inquires whether the contemplated standard for SSTMs should include a requirement for acceptance of contactless payment systems. While we believe that the integration of contactless payment capabilities should be encouraged, we do not believe that it should be required in this standard.

As previously discussed, a retail self-checkout system is not a single unified platform. It is a bundle of systems, with the payment system maintained separately from the scanning and checkout systems. This complicates the question of acceptance of contactless payments. Acceptance of a contactless payment on the main screen of a self-checkout would present several challenges. For a visually impaired person, locating the correct location for making the payment on a large expanse of glass would be difficult, and likely result in misreads or transaction failures.

If the requirement for contactless payment acceptance was directed at a smaller payment module connected to the self-checkout, the edges of the payment zone would be more easily identified and misreads would be less likely. While contactless payments offer some advantages for people with poor manual dexterity, those benefits may be offset by other issues. Use of a contactless payment can more easily trigger an accidental card read, and there may be no immediate feedback to the user that an error has occurred. This concern may be alleviated somewhat when using a contactless payment with an NFC-enabled mobile device. However, on the whole, we believe that the Access Board should not establish a contactless payment requirement at this time.

Conclusion:

We appreciate having the opportunity to offer these comments at this early stage of the Access Board's consideration of a proposed ADA standard for self-service transaction machines. We also appreciate our previous interactions with the Access Board and discussions about accessibility technologies. We hope that the Access Board will seriously consider modernizing the standard for ATMs as it works on a new

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standard for SSTMs. Standards for technology-enabled platforms should be periodically updated to encourage innovation and recognize new developments.

At NCR, we are committed to promoting the accessibility of our products and enabling people with disabilities to participate fully in society. We look forward to working with the Access Board and other stakeholders as this process moves forward.

Sincerely,

A handwritten signature in black ink, appearing to read 'Justin Clay'. The signature is fluid and cursive, with the first name 'Justin' and the last name 'Clay' clearly distinguishable.

Justin Clay
Vice President, Communications
And External Affairs
NCR Corporation