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November 19, 2021

National Institute of Standards and Technology, Department of Commerce
1401 S. Clark Street
100 Bureau Drive
Gaithersburg, MD 20899

RE: NIST-2021-0005

Thank you for the opportunity to comment upon NIST-2021-0005, National Institute of Standards and Technology's draft report, "Promoting Access to Voting: Recommendations for Addressing Barriers to Private and Independent Voting for People with Disabilities." We appreciate the role the report has in responding to Executive Order 14019 of March 7, 2021.

<u>Background on Microsoft</u>
Microsoft's mission is to empower every person and organization in the world to achieve more. Ensuring people with disabilities are able to exercise their fundamental rights and have the ability to vote privately and independently is a key part of that mission. Microsoft strongly agrees that the list of systemic barriers presented limit access to voting for people with disabilities. These barriers also reinforce each other to further deleterious effect.

The right to vote is foundational and the most cherished aspect of our democracy. It must be protected. Indeed, we at Microsoft have a deep and enduring interest in protecting the right to vote, both as citizens and employees, as an employer, but also as members of the business community: maintaining a healthy, vibrant, and stable democracy, backed by the rule of law, is essential to our free-market system and, therefore, is essential to our business and every business across America. That is why we support efforts to: protect the freedom to vote for all Americans; make our elections safe, accessible, secure, and transparent; and provide all voters with equal access to clear and understandable information.[i]

Response to Report

1. Steps needed to ensure that the online National Voter Registration Form is accessible to people with disabilities.

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A foundational commitment to accessibility and universal design are critical to make sure the National Voter Registration Form works well for everyone[ii] . Commitments to consider:

- As articulated in the Inclusive Innovation Playbook, people are fundamental to innovation and their diversity increases the potential for innovation[iii]. As the National Voter Registration Form is modernized, a diverse group of people with disabilities should be engaged in design, testing, implementation, and evaluation to drive the most accessible formats.
- Accessibility standards should not simply be met, but exceeded, by using inclusive design methodology to implement a form to reach the broadest possible group of voters.[iv]
- While modernization of the form will increase access, full accessibility in the voter registration space requires maintaining paper and in-person registration options in each jurisdiction to provide a full range of access and accommodation.

2. Identify barriers and publish recommendations to remove barriers preventing individuals with disabilities from accessing voter registration systems and voting technology, utilizing voting by mail, using polling locations, as well as recommendations that address training and documentation associated with the technical barriers for poll workers to support accessibility.

COVID-19 forced states to review and assess their electoral systems to determine how they could provide safe, secure, and efficient elections. Many states began to embrace common-sense solutions to expand access to the ballot box such as vote by mail and extended early voting hours to allow voters to exercise their constitutional right. This not only allowed for expanded access it also helped to maintain public health and safety. By embracing multiple options to vote, jurisdictions were also able to maintain in-person options to ensure that no communities were negatively impacted by such shifts. To prevent any form of disenfranchisement and to ensure that all eligible voters have free and fair access to the ballot, states should embrace a menu of options for voting, such as:

- In-person voting options, including adequate and accessible early voting locations and time periods.
- Polling locations designated on tribal lands.
- Online registration and same-day voter registration.
- Ballot tracking measures to permit voters to verify that their ballots have been processed and counted.
- No-excuse absentee ballots and provisional ballots.

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Voters with disabilities in particular need a variety of options to exercise their right to vote. For example, voters who are visually impaired may need access to accessible voting equipment – audio ballots and touch screens – which are typically accessible only at polling locations. Voters with arm impairments may need electronic assistance mechanisms such as ballot marking devices to mark paper ballots. We must ensure that a range of voting options are available for voters.

3. Recommendations to remove barriers preventing individuals with disabilities from accessing voter registration systems and voting technology.

The recommendation "Create guidance to help address meeting federal standards, laws, and guidelines" is necessary but not sufficient. A large minority of the voting population, whether they identify as disabled or not, cannot vote with paper-based systems either in precinct or home situations due to either the limitations inherent in processing the information on the page (the formally recognized definition of "print disability") or handling the paper itself (placing into a scanner or printing, addressing, and mailing). In many respects, these limitations are inherent and unavoidable and need to be more fully acknowledged. Simply requiring that vendors conjure solutions from the existing requirements, albeit with improved guidance, does not address the core challenge already codified into the regulations.

While the VVSG 1.1 regulations raised the accessibility bar to require voting system vendors make the *entire system* accessible, not just individual voter-interaction components, this occurred alongside an increased emphasis on security, and with a bias toward paper-based systems for software independence and dispute resolution strongly advocated for by the security community. Add the systemic barrier that paper-based systems are not accessible (as the study notes, the use of paper *is* the barrier), and the net result is that **no system has achieved the 1.1 standards** since they were adopted in 2015.

The 2.0 standards offer additional clarity and flexibility, encouraging usability innovation, but still within the binding constraint of the entire system being accessible. While the National Institute of Standards and Technology report rightly recognizes the importance of making all voting systems and methods *more* accessible over time, it is nonetheless an empty platitude if newer systems capable of providing some of those improvements never get off the ground due to unattainable requirements.

Microsoft appreciates the recognition of its ElectionGuard technology as a potential solution to increasing accessibility in Section 2.2.5. While originally developed to improve confidence in the outcome of elections due to its ability to help systems achieve software independence, it also provides a platform for accessible voting methods to integrate into larger certified voting systems. As such, we strongly encourage any regulatory processes that allow for component-based certification or T adoption.

Microsoft recognizes that ElectionGuard and end-to-end verifiability is a newly available technology (although its conception and potential use have been known for decades), and people are unfamiliar with its practice and these wider benefits. We plan on sponsoring and participating in conferences, workshops, usability and demo events, and other actions to familiarize organizations with its proper adoption. We are also participating in "lighthouse" pilot elections of limited scope to build familiarity, learn about the reaction of different constituencies, and validate its efficacy. We hope NIST and its affiliated subject matter experts and interested parties will participate as well and offer feedback and support.

Beyond ElectionGuard, Microsoft encourages further experimentation with universal design and innovative technologies to improve access to voting for everyone. For example, the ElectionGuard "reference implementation" voting kiosk is built around a Surface tablet and the Xbox Adaptive Controller, an Assistive Technology device that allows gamers to plug in whatever accommodations they need via 3.5mm RCA connector and thus use their own "rig" to play the Xbox as well as those with full hand control. This illustrates our focus on having systems respond to people and how they prefer to interact rather than forcing the user to adopt its UX conventions.

Microsoft believes that using the XAC, or technologies like it, as a secure interface for mediating interaction will enable a more modular and flexible way for in-person voters to participate comfortably and independently. Because systems would plug into the XAC and not the "voting system" (a Surface or other electronic device), there is little security risk because the interface can only execute the commands available to it: navigating and selecting items on a ballot. As indicated in VVSG 2.0, this also opens the option of wireless technologies such as Bluetooth to be used in the voting booth; the functional isolation of control mediates the access risk of Bluetooth, since it never "touches" the system, only the interface device.

Enabling a secure, straightforward way for voters to use Bluetooth as part of the voting process opens the door to limited-mobility users that use Bluetooth-based

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accommodations in other aspects of their lives. For example, many limited-mobility users control navigation of their power wheelchairs using eye gaze or suction tube mechanisms. By making those control gestures recognizable by the voting device, limited-mobility voters achieve full agency of ballot selection using control mechanisms they are comfortable and competent with already.

The only way to address the twin pillars of security and accessibility that should govern all elections is to build both into voting systems from inception. Accessibility isn't a "bolt on," nor is security. Both must be considered as intrinsic to system conception and execution. Similarly, blanket prohibitions on technologies simplify complex challenges with overly blunt restrictions, to the detriment of those who could benefit from their appropriate use.

In closing, we want to again emphasize our emphatic support for this effort. This NIST document recognizes many of the issues we need to address to make voting more accessible to everyone. Now is the time to act to fix them.

Thank you again for the opportunity to comment.

Sincerely,

Teresa Hutson (CELA) (Nov 19, 2021 09:22 PST)

Teresa Hutson
Vice President, Tech and Corporate Responsibility