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CENTER FOR SCIENTIFIC EVIDENCE IN PUBLIC ISSUES

acm U.S. Technology Policy Committee

April 17, 2023

By Electronic Mail

Hon. Jocelyn Benson, Secretary of State
State of Michigan
Richard H. Austin Building
430 W. Allegan St. - 4th Floor
Lansing, MI 48918

Re: The Continued Inherent Insecurity of Internet Voting

Dear Secretary Benson:

We are writing from the American Association for the Advancement of Science's (AAAS) Center for Scientific Evidence in Public Issues and the U.S. Technology Policy Committee of the Association for Computing Machinery (USTPC) regarding the Michigan legislature's consideration of authorizing insecure internet voting. AAAS, the world's largest multidisciplinary scientific society, and ACM, the world's largest computing society, work apolitically to promote the responsible use of science and technology in public policy.

As the legislature considers the issue, we write to caution unequivocally that ***internet voting*** – referring primarily to the electronic return of a marked ballot via email, fax, web-based portal, or mobile apps – ***is not a secure solution for voting in Michigan or elsewhere in any form, nor will it be in the foreseeable future***. Indeed, those facts have not changed since April of 2020 when we jointly wrote to every governor, secretary of state, and state election director across the country detailing the scientific and technical risks of internet voting and urging officials to refrain from allowing the use of any internet voting system. More than 80 leading organizations, scientists, and security experts also signed that letter, which documents that:

- All internet voting systems and technologies are inherently insecure.
- No technical evidence exists that any internet voting technology is safe or can be made so in the foreseeable future; rather, all research performed to date demonstrates the opposite.
- Blockchain technology cannot mitigate the profound dangers inherent in internet voting.
- No mobile voting app is sufficiently secure to permit its use.

These statements distill the findings of more than two decades of rigorous, science-based analysis.

In 2020, the Cybersecurity and Infrastructure Security Agency (CISA), the Election Assistance Commission (EAC), the Federal Bureau of Investigation (FBI), and the National Institute of Standards and Technology (NIST) jointly released additional guidance describing the electronic return of ballots as "high-risk even with controls in place." The guidance explains that "***electronic ballot return, the digital return of a voted ballot by the voter, creates significant security risks to the confidentiality of ballot and voter data (e.g., voter privacy and ballot secrecy), integrity of the voted ballot, and availability of the system***… Securing the return of voted ballots via the internet while ensuring ballot integrity and maintaining voter privacy is difficult, if not impossible, at this time."

These concerns echo a 2018 consensus study report on election security by the National Academies of Science, Engineering, and Medicine (NASEM), the most definitive and comprehensive report on the scientific evidence behind voting security in the U.S. to date, which stated:

> "***At the present time, the Internet (or any network connected to the Internet) should not be used for the return of marked ballots.*** Further, Internet voting should not be used in the future until and unless very robust guarantees of security and verifiability are developed and in place, as ***no known technology guarantees the secrecy, security, and verifiability of a marked ballot transmitted over the Internet***."

Moreover, despite these profound risks, a recent report by MIT researchers concluded that "online voting may have little to no effect on turnout in practice, and it may even increase disenfranchisement."

We share legislators' desire to expand ballot access for all but respectfully submit that Michigan can best demonstrate leadership in election security by committing to scientifically sound election systems that embrace both accessibility and security. As noted in these remote voting recommendations, ***more secure alternatives exist to provide accessible remote voting for overseas uniformed personnel, individuals with disabilities, and others who may have difficulty accessing the ballot***.

We would welcome the opportunity to discuss more secure alternatives to internet voting with you and your colleagues, including accessible remote voting by mail, and to connect you with leading experts on these technologies. To arrange for such briefings, please don't hesitate to contact us directly.

Thank you for your time, consideration, and assistance.

Respectfully submitted,

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