

March 11, 2021

Written testimony on SB 548, SD1 Relating to Elections by Mail Section 21

I am writing from the [American Association for the Advancement of Science's \(AAAS\) Center for Scientific Evidence in Public Issues](#) regarding Hawaii's consideration of electronic ballot return. AAAS, the world's largest multidisciplinary scientific society, provides an unbiased, non-partisan voice for science on societal issues and promotes the responsible use of science and technology in public policy.

Section 21 of SB 549 (referring to HRS § 11-107) would permit ballots to be forwarded and returned by electronic transmission. The electronic return of a marked ballot via email, fax, web-based portal, or mobile apps, is not a secure solution for voting in Hawaii or elsewhere, nor will it be in the foreseeable future. There is broad agreement among election, computing and intelligence experts that such online voting poses unacceptable risks to the security of elections as well as voters' privacy. In April 2020, we [wrote to every governor, secretary of state, and state election director](#) across the country detailing the scientific and technical risks of internet voting. To date, more than 80 leading organizations, scientists, and security experts have signed the letter, which documents that:

- All internet voting systems and technologies are currently 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.

These statements reflect the findings of both recent and two decades of rigorous, science-based analysis. In May, 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) released [additional guidance](#) describing the electronic return of marked 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. 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.”

Hawaii can 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. Hawaii election officials should attempt to use these alternative strategies whenever possible and limit electronic ballot return to situations where ballot return is otherwise impossible or imposes a severe burden on voters.

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.

Thank you,

A handwritten signature in black ink, appearing to read "Michael Fernandez". The signature is fluid and cursive, with a large, sweeping flourish at the end.

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