Examining the Sustainability of Balloting Solutions for Military & Overseas Voting
Introduction

Members of the military serving abroad and other U.S. citizens residing overseas face unique challenges when trying to obtain and cast their ballots in U.S. elections. Service members deployed to the Middle East and working from remote forward operating bases, scientists at McMurdo Station in Antarctica, Doctors Without Borders staff aiding communities in remote villages, and others in difficult-to-access locations often have to overcome hurdles to exercise their right to vote. Mail operations can be intermittent or even nonexistent. Power, and therefore access to electronic communications, can be unreliable.

As a result, election officials face a daunting challenge in accommodating these voters. Officials are further hamstrung by outdated systems that are too costly, in terms of both capital and human resources, to update. Many of these systems were created by federal grant money that no longer exists and was never intended to be used for updates.

A group of 13 election officials who are committed to ensuring election access for military and overseas citizen voters have taken up the challenge of examining the different approaches states and jurisdictions have taken. These officials have identified what areas need further research to ensure citizens abroad can participate in U.S. elections.
A Proposed Way Forward: 
The Sustainability of UOCAVA Balloting Solutions

The Council of State Governments, or CSG, through its Overseas Voting Initiative, or OVI, in collaboration with the Federal Voting Assistance Program, or FVAP, is conducting research in the area of sustainable solutions for Uniformed and Overseas Citizens Absentee Voting Act, or UOCAVA, ballot delivery and ballot return. UOCAVA citizens are U.S. citizens who are active members of the uniformed services, the Merchant Marine, and the commissioned corps of the Public Health Service and the National Oceanic and Atmospheric Administration, their eligible family members and U.S. citizens residing outside the U.S. The act provides the legal basis for these citizens’ absentee voting requirements for federal offices.

This report summarizes efforts to better understand why UOCAVA ballot delivery and return solutions have not been as sustainable as intended. In many cases these solutions appear financially burdensome to state and local election jurisdictions. Fostering UOCAVA solutions that will assist jurisdictions regardless of federal funding is critical. Additionally, it is vital to keep pace with changing security requirements. There is a need for legislation that reflects evolving technology and jurisdictional needs.

This research, along with evaluation and education by OVI together with states, local jurisdictions, election technology providers and other election community stakeholders, must continue until all UOCAVA voters have an opportunity to receive and cast a ballot that is as efficient, secure and accessible as stateside voters.

This research must continue until all UOCAVA voters have an opportunity to receive and cast a ballot that is as efficient, secure and accessible as stateside voters.
The technology solutions designed to aid military and overseas voters in requesting, receiving and returning their ballots are ageing. Many of these systems have been in use for approximately a decade. They were created as a result of the amendments to UOCAVA in the Military and Overseas Voter Empowerment, or MOVE, Act of 2009.¹

In 2011, and again in 2013, FVAP—the U.S. Department of Defense program responsible for providing military and overseas voters with nonpartisan information about voter registration and assistance with the absentee voting process—offered grants to states and local election jurisdictions nationwide to research solutions to enhance the voting process for U.S. citizens covered by the UOCAVA.² These grants were called Electronic Absentee System for Elections, or EASE, grants. A total of $35 million was awarded to 46 states and local jurisdictions through this program.³

The EASE grants funded the research and implementation of solutions aimed at improving the return rate for military and overseas ballots. They also ensured states had the funding to meet the requirements of the MOVE Act. It is important to note that the grants were not used to fund research or facilitate the development of systems providing for the electronic return of voted ballots. EASE grants were only available to fund research into the electronic delivery of election materials, including voter registration, ballot request and unmarked ballots. These grants also enabled additional solutions that focused on increasing customer service or improving election administration processes in response to MOVE Act reforms including online ballot requests, online voter registration, automated ballot duplication and online ballot tracking.

Ten years later, there have been significant advances in military and overseas voting thanks to the leadership of FVAP—Federal Voting Assistance Program—and dedication and support of state and local election officials. Some of these advances are highlighted in FVAP’s State of the Military Voter data, examining post-election research for gains made since 2006.⁴

Currently, there is no federal funding available for technology to support military and overseas voters. The EASE grant program provided initial financial support to election jurisdictions for the research and implementation of sustainable UOCAVA technology solutions, but it was not intended for the ongoing maintenance, development and support of the grant-invested programs or any new technology initiatives to support voters covered under UOCAVA.

Many jurisdictions rely solely on ongoing maintenance of these grant-funded solutions, most of which are now seven to nine years old and have become outdated. Given that these technologies need to be upgraded without disrupting citizens’ ability to vote or compromising election security, a well-planned replacement strategy is needed, which is costly.

Many of the EASE grant-funded solutions are not sustainable long term. A relatively small customer base at the local election jurisdiction level makes them expensive on a per voter basis, system maintenance costs have increased, and the complexity and lack of scalability in UOCAVA solutions preclude a one-size-fits-all approach in small jurisdictions with limited technical resources. Additionally, the U.S. Department of Homeland Security designated election technology as critical U.S. infrastructure, which has resulted in heightened awareness on the need for continually evolving cybersecurity policies and procedures that impact existing solutions.⁵ On-site technical resources to maintain some of these solutions is not affordable for all jurisdictions.
A challenge for integrating UOCAVA technologies with other voting and voter registration systems in a jurisdiction is maintaining interoperability as these solutions are upgraded and replaced. Finally, the expectations of voters to have the most intuitive web-based tools and the most comprehensive information at their fingertips continues to outpace the level of change and reinvestment for election officials.

It is also important to note that UOCAVA solutions created by election technology providers to enhance military and overseas voting are marketed in several different ways:

- as part of a voting system
- as part of a voter registration system
- as a stand-alone solution
- not provided, or provided in partnership or by referral

Overall, UOCAVA solutions account for a tiny segment of the already small, fragmented and volatile election technology marketplace. Election officials have a limited pool of options for purchasing new technology, particularly for a relatively small population like overseas and military voters, which may not be profitable for technology providers. As a result, election officials have to consider alternative in-house technology solutions.

Ultimately, election jurisdictions experienced different levels of success with their EASE grant funded solutions. However, there is room for improvement across the board in light of the growing complexity of election procedures, new cybersecurity requirements, and the need for transparency and increased efficiency.

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FVAP’s latest research found that in 2018:

53% of the ballots sent to military and overseas voters were successfully counted—an increase of 23% since 2006.

Far fewer would-be voters (military members who wanted to vote but didn’t) cited ballot receipt issues as their reason for not voting.
The Work of The Council of State Governments on Sustainable UOCAVA Balloting Technology

The Overseas Voting Initiative, a collaboration between CSG and FVAP, created a subgroup of its OVI Working Group in 2019 to examine the sustainability of post EASE grant UOCAVA solutions.

The Sustainability of UOCAVA Balloting Solutions Subgroup, or SUBSS, convened its inaugural meeting on March 13, 2019, during the CSG OVI Working Group meeting in San Diego, California.

SUBSS met with several UOCAVA technology providers at the San Diego meeting to learn more about their successes, challenges and future efforts to aid military and overseas voters through their solution offerings.

SUBSS also heard from a panel of Voting Assistance Officers from every branch of the military, the State Department, and the Military Postal Service Agency. This panel discussed the challenges that military and overseas citizens face during the election process.

Through their extensive discussions over multiple days, the SUBSS determined that they should primarily focus their work on trends in UOCAVA solutions associated with ballot delivery and ballot return processes. They chose the following attributes for consideration when examining trends in UOCAVA balloting solutions: accessibility, affordability, data availability, efficiency, good procurement practices, security and usability.

Barriers to Sustainability

Many of the EASE grant-funded solutions are not sustainable long term due to a number of barriers, which include:

- A relatively small customer base at the local election jurisdiction level makes them expensive on a per voter basis.
- System maintenance costs have increased, and the complexity and lack of scalability in UOCAVA solutions preclude a one-size-fits-all approach in small jurisdictions with limited technical resources.
- Continually evolving cybersecurity policies and procedures that impact existing solutions are difficult to implement.*
- On-site technical resources to maintain some of these solutions is not affordable for all jurisdictions.
- A challenge for integrating UOCAVA technologies with other voting and voter registration systems in a jurisdiction is maintaining interoperability as these solutions are upgraded and replaced.
- The expectations of voters to have the most intuitive web-based tools and the most comprehensive information at their fingertips continues to outpace the level of change and reinvestment for election officials.
Prior to the MOVE Act, only **37 states** transmitted blank ballots **electronically**, & in half of those states the option was limited **to fax**.

When examining trends in UOCAVA balloting solutions, the Sustainability of UOCAVA Balloting Solutions Subgroup chose the following attributes for consideration:

- security
- accessibility
- usability
- sustainability
- affordability
- good procurement practices
- efficiency
- data availability

Source: Federal Voting Assistance Program
Preliminary Landscape Analysis:
Trends in UOCAVA Ballot Delivery Solutions

During their initial discussions about UOCAVA technology, SUBSS identified the following trends to research. SUBSS will focus on the challenges and opportunities surrounding each of these types of UOCAVA ballot delivery solutions:

**Email Delivery of Blank Ballots**
While email delivery of blank ballots to UOCAVA voters has been in use since the MOVE Act—and well before in some states—further research is necessary to determine the most secure and accessible ways to send and receive ballots via email, especially to our military voters, who often have limited connectivity bandwidth and must navigate firewalls at the Department of Defense and military installation level.

**Access to Blank Ballots and Voting Materials via Voter Portal**
Several states have been making advancements in the development of portals that allow voters to access individualized voting materials, sample ballots and polling place information in addition to their absentee ballot. States, including Nevada, Vermont and Wisconsin, have developed “one-stop self-service” portals where voters can access all their election materials at any time—including their blank ballot—saving both time and money for election jurisdictions and voters. Portals mirror the current paper-based process to request an absentee ballot while increasing access to documents and up-front checks, which in turn reduces human error and processing delays. It should be noted that portals do not permit the ability to cast a marked ballot—only access, mark and receive their materials in an electronic format.

**On-screen Ballot Marking**
With this capability, a voter can download their ballot, mark it on screen and electronically return the ballot to the local election office, or print and mail the ballot to the local election office, depending on state laws. On-screen ballot marking provides less ambiguity and less potential for ballots that require duplication. However, the permissibility of this technology is in debate in several states. The state of California recently instituted Remote Accessible Vote by Mail systems, which must be available to voters by Jan. 1, 2020.⁷ The term itself speaks to the nature of these solutions in meeting not only UOCAVA voter needs, but also access issues for persons with disabilities. These systems are specifically designed for voters

Improving ballot delivery to our nation’s voters covered under UOCAVA is at the forefront of the EASE grants. The MOVE Act amendments to UOCAVA focused primarily on ballot delivery and require that states:

- transmit ballots at least 45 days before federal elections
- offer at least one method of electronic transmission (email, fax, online portal, etc.) of voting information and blank ballots
- transmit ballots automatically within the calendar year of the ballot request
with accessibility challenges as well as UOCAVA voters to provide additional channels to access their ballots. Vermont implemented a similar system in 2018 that allows voters with a disability and UOCAVA voters to receive their ballot electronically, mark it on screen, and print the marked ballot for return. Because they serve voters with disabilities, federal Help America Vote Act funding can be used to support these systems, potentially aiding elections jurisdictions in addressing the affordability and sustainability of UOCAVA systems.

**Common Access Cards and Digital Signature Verification**

Some states are considering the acceptance of digital signatures from Department of Defense Common Access Cards, or CACs, to complete forms to register to vote and request an absentee ballot. Through the work of OVI, and pioneers such as Montana and Nevada, additional states are evaluating CACs as an option to aid UOCAVA voters. SUBSS recommends a broader educational program to support states in expanding the use of CACs and digital signature verification for UOCAVA citizens with CACs and to streamline implementation.

**Tracking Outbound Ballots**

In 2016, CSG’s OVI, the United States Postal Service, or USPS, the Military Postal Service Agency, or MPSA, and FVAP teamed up on the Military Ballot Tracking Pilot, or MBTP, an innovative project to provide full visibility to ballots heading to and from military personnel serving overseas. This idea for the MBTP grew from the desire to provide total customer service to military personnel serving abroad. It was also intended to provide a more accurate picture of the postal trail of military ballots as they travel overseas and are received by military personnel. This, coupled with the tracking of a ballot’s return trip to the voter’s local election office in the U.S. for tabulation using the Military Postal Service DoD-11 Label, provided a completed round-trip perspective and a feature never previously provided for balloting materials.
Ballot return methods are authorized by individual state election law and are not under the purview of FVAP or any federal authority and are not covered as part of the UOCAVA. As a result, they were not part of FVAP’s EASE grant program. In fact, the grant program expressly prohibited the consideration of voted ballot return in their research and focused instead on the specific reforms from the MOVE Act.
The most recent publicly available survey of states focused on electronic ballot transmission reports that 31 states plus the District of Columbia allow some form of electronic ballot return of voted ballots by UOCAVA voters either via fax, email or portal.\(^1\) Returning ballots by mail continues to be the default option for UOCAVA voters, and in 19 states mail is the only approved option for ballot return.

With almost two-thirds of states allowing for some type of electronic ballot return, SUBSS needs to fully understand and evaluate all electronic ballot return methods including those incorporating blockchain- and non-blockchain-based mobile applications and online portals. Several states and local jurisdictions are using these methods of ballot return in addition to email and fax and are reporting positive feedback from their voters.

Other states and local jurisdictions are interested in exploring electronic ballot return options to support both their UOCAVA voters and voters with disabilities by offering a wide variety of convenient and accessible ballot return options.

Some states are exploring electronic ballot return methods as part of their contingency planning and emergency preparedness programs. States are under increasing legislative pressure to have contingency plans in place for all aspects of their election systems, including UOCAVA balloting solutions, due to recent national disasters such as Hurricane Sandy, Hurricane Maria, and Hurricane Dorian, and global threats of terrorism, civil disobedience, cyberattacks and mail service disruptions. This was magnified in 2019 with the potential withdrawal of the U.S. from the Universal Postal Union, or UPU, which may have resulted in the use of commercial couriers to ship ballots to overseas citizens at significant cost to the state and local jurisdictions as well as individual American civilians residing overseas.

While the status of the United States within the UPU has implications for global shipping far beyond UOCAVA ballot transport, this issue has brought a spotlight to the need for alternate distribution methods and outside-the-box ideas for all organizations that depend upon the USPS shipping channels especially as part of a greater need for contingency operations.

During their initial discussions about UOCAVA technology, SUBSS identified the following trends to research. SUBSS will focus on the challenges and opportunities surrounding each of these types of UOCAVA ballot return solutions:

**Electronic Ballot Return via Email**

Email remains the most popular electronic ballot return method used by UOCAVA voters whose state laws allow it; however, as technology evolves, there are more threats to email transmissions and a need for more cybersecurity risk mitigations.
Electronic Ballot Return via Portal
In 1997, astronauts were the first UOCAVA voters to access their blank ballots and return them via encrypted portals. Some states, including Alabama, have been using encrypted portals for the return of UOCAVA ballots for several years. Others are researching ballot return via portal for their voters as allowed by their individual state laws.

Electronic Ballot Return via Mobile Devices
Electronic ballot return pilot programs using blockchain- and non-blockchain-based mobile applications are taking place throughout the U.S. A recent pilot program in West Virginia used a blockchain-based mobile application. During the pilot, this ballot return method was available to West Virginia registered voters who were active-duty members of the military and their eligible dependents. While this and other pilots are often hailed as successful by election officials, computer scientists and activists continue to raise security concerns.

Duplication Methods for Damaged or Machine Unreadable UOCAVA Ballots
Regardless of ballot return method used by voters, most jurisdictions require some form of ballot duplication so their tabulation systems can read these ballots. The OVI initially examined ballot duplication methods in 2017. Since then, technology offerings in the marketplace have advanced and the need for scalable and affordable solutions has increased.
Stand-Alone UOCAVA Workstations and Sandboxes for Return Ballot Retrieval
Some states, including New Jersey and Nevada, are utilizing sandboxes (e.g., server partitions to provide more secure enclaves) to provide their local jurisdictions with a more secure environment where electronic ballot attachments can be opened securely to isolate potential viruses or other malware. Nevada uses a sandbox environment in its election jurisdictions accounting for 90% of the state’s registered voters and is finding this to be a helpful risk mitigation method.

Assessment of Fax Machine & Internet Connection/Email Access for Military
There are some states, Florida for example, that only allow electronic ballot return via fax. Fax machine usage is dwindling and there are more efficient and secure methods of electronic return. However, state laws do not change as frequently as technology, and data beyond anecdotal evidence is needed to demonstrate to policymakers the need for new legislation. SUBSS would like to understand more about the availability of fax technology for active duty military personnel.

Tracking Inbound Ballots
The Military Ballot Tracking Pilot, which tracks paper ballot delivery and return for military voters, is referenced earlier in this paper under the Trends in Ballot Delivery section. SUBSS believes the successful 2016 pilot should be expanded to address the ballot return needs for all U.S. citizens residing abroad. Although not federally funded in 2020, SUBSS believes with more education of its importance by OVI, the pilot can potentially be expanded without federal funds.
Acknowledgements

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Many active duty military personnel are located in remote areas abroad and have limited access to state voting information and, in some cases, their ballot. U.S. citizens living overseas also have unique challenges in exercising their right to vote. These challenges are complicated by extreme variation in how states conduct elections and how absentee ballots are processed.

In 2014, The Council of State Governments launched OVI, a four-year, $3.2 million program, with the U.S. Department of Defense Federal Voting Assistance Program to improve the return rate of overseas absentee ballots. After the success of the initial program, in 2018 FVAP collaborated with CSG on a $3.9 million, five-year effort to help uniformed services personnel and other U.S. citizens overseas vote in federal elections.

As part of this effort, OVI maintains a working group that examines two distinct areas pertinent to military and overseas voting: The Sustainability of UOCAVA Balloting Solutions and Data Standardization and Implementation. Through OVI, CSG continues to provide state policymakers, state and local election officials, and other election community stakeholders with research and best practice guides to ensure the men and women of the U.S. military and Americans living overseas can enjoy the same right to vote as citizens living in the U.S.

OVI is housed in the CSG Center of Innovation. CSG operates its Center of Innovation to provide focused research to its members around forward thinking, innovative policy solutions to the challenges facing states.

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