

# **Bridging the Gap: Simplifying the process for UOCAVA voters through innovative technology and data collection**

## **Technical and Management Submission**

- 1) Catalog of Federal Domestic Assistance Number: 12.217
- 2) BAA number: HQ0034-FVAP-11-BAA-0001
- 3) Title of Proposal:  
“Bridging the Gap: Simplifying the process for UOCAVA voters through innovative technology and data collection.”
- 4) CAGE Code 6ES14 and DUNs Number 360744247.
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- 8) Period of Performance: September 2011 to January 2013

# Table of Contents

<b>Technical Approach.....</b>	<b>3</b>
1) Executive Summary	3
2) Goals & Objectives	4
a. Task #1 – Define and Implement UOCAVA Outreach Program	5
b. Task #2 – Develop and Implement Evaluation Plan	6
c. Task #3 – Expand Voter-Facing Website Tools and Services	6
d. Task #4 – Develop Ballot Data Translation Tool	7
e. Task #5 – Develop & Implement Online Ballot Delivery & Transcription system	8
f. Task #6 – Administer System for 2012 Elections	8
3) Schedule & Milestones	9
4) Reports	11
<b>Management Approach.....</b>	<b>12</b>
1) Project Team	12
2) Strategic Goals	12
3) Definition of Research Project	13
4) Proposed Process Improvements to be Examined	
a. Voter-Facing Website Tools & Services	13
b. Automated Transcription	14
c. Mobile Voter Registration Application	14
d. Ballot Data Translation Tool	14
e. Online Ballot Delivery System with Automated Ballot Transcription	14
5) Project Management	15
6) Risk Management	15
7) Current and Pending Project Proposal Submissions	17
8) Qualifications	17
<b>Evaluation Criteria Compliance Table.....</b>	<b>18</b>
<b>Resumes and Curricula Vitae for Key Personnel.....</b>	<b>20</b>

## TECHNICAL APPROACH AND JUSTIFICATION

### 1) Executive Summary (1 page)

The State of Ohio is home to approximately 61,000 active duty military and overseas civilians. Approximately 35,000 of these are active UOCAVA voters in the Ohio election system. In 2008 approximately 32,000 ballots were sent out and slightly over 26,000 returned, resulting in an 80.8% return rate. These statistics suggest two issues: a large number of Ohio UOCAVA citizens are not participating in the electoral process; and those who are attempting to participate are experiencing an unacceptably high non-return rate. This project will test the hypothesis that providing easy to use online access to voter information resources, combined with tools to reduce voter errors and a flexible and predictable ballot delivery process, will result in a higher success rate (defined as % of ballots counted) in the near term for those already participating and over time will increase the participation rate.

Our project will couple our core voter registration and absentee ballot application capabilities with seamless access to UOCAVA voter information and online ballot delivery and tracking to provide a solution for Ohio UOCAVA voters seeking to participate even within a limited timeframe. We will enable a higher level of engagement by all Ohio jurisdictions by providing them with assistance to enhance their websites as well as tools to reduce their applications and ballot processing workload.

Looking to the future and considering the evolving public expectation for convenient access to government services, we propose to develop a mobile smart phone voter registration application. This capability is expected to be of particular interest to younger voters, who are accustomed to using mobile devices for a great variety of purposes, and who might not otherwise participate.

At the core of our project is the use of automated data collection to evaluate each aspect of the online process that voters utilize: viewing information pages, registering and requesting a ballot, downloading and tracking a ballot or utilizing the FWAB. This will provide essential information to enable us to measure how well the UOCAVA voting process is working in Ohio. In addition to the integrated data collection and reporting, we will be able to take full advantage of Google Analytics process and reporting capabilities, to gain insight into the usage of the tools and services by the voters. Project evaluation will be conducted by an academic team headed by a state university professor working in collaboration with the Overseas Vote Foundation (OVF) and our system vendor to provide a thorough analysis of how each of the various elements of the project contributed to voter success with registering, obtaining a ballot, and having their ballot be counted. The tools and procedures we develop will have general applicability for many other jurisdictions and we will share documentation and statistics with any jurisdiction that requests it.

## 2) Goals and Objectives (5 pages)

### Goal #1 : DEVELOP A UNIFORM STATEWIDE SYSTEM THAT PROVIDES A COMMON SUITE OF AUTOMATED TOOLS FOR ALL OHIO UOCAVA VOTERS

#### Objective 1 – Improve ease of access to voter information

Performance Measures: Adoption of state UOCAVA website tools and services by at least half of Ohio's counties, including 9 largest. Voter satisfaction survey on accessibility of information.

#### Objective 2 – Provide cost effective and sustainable website assistance for counties

Performance Measures: Return on investment realized by expansion of tool access to larger pool of users through more web outlets. Reducing cost of participation for smaller counties through centralized development process.

#### Objective 3 – Reduce LEO processing time and level of effort

Performance Measures: Comparison of data entry time between bar-coded and non-bar coded FPCAs. Comparison of error rate between scanned data entry and manual data entry. Comparison of processing time between bar coded and non-bar coded ballots. Comparison of error rate between scanned ballots and manually transcribed ballots.

### Goal #2 : CREATE TOOLS THAT ADDRESS KNOWN PROBLEMS EXPERIENCED AT EACH STAGE OF THE ABSENTEE VOTING PROCESS

#### Objective 1 – Reduce FPCA failure rates

Performance Measures: Comparison of 2012 and 2008 rejection rates for illegibility; comparison of 2012 and 2008 rejection rates for incompleteness

#### Objective 2 – Reduce total ballot transit time

Performance Measures: Comparison of total ballot transit time for ballots delivered online to ballots delivered by mail, email and fax. (Total ballot transit time means from the time the ballot is sent out by the LEO until it is returned to the LEO.)

#### Objective 3 – Increase ballot return rate

Performance Measures: Comparison of percentage of ballots returned by method of ballot delivery, e.g., online, mail, email, fax.

#### Objective 4 – Reduce number of spoiled votes

Performance Measures: Comparison of rate of spoiled votes (e.g., over-voted) and spoiled ballots (e.g., extraneous marks, illegal marks) for ballots marked online versus ballots marked by hand.

#### Objective 5 – Preserve secrecy of ballot during transcription process

Performance Measures: Compare possible threats to ballot secrecy utilizing the current mail process versus the online ballot creation, printing, and barcoding process to understand the improved level of secrecy being offered and additional steps that can be taken.

Objective 6 – Enable voters to track status of their ballot, e.g., when ballot sent out, when received by LEO

Performance Measures: Number of voters who utilize ballot tracking service

Goal #3 : UTILIZE LOW RISK SUSTAINABLE TECHNOLOGY TO INTERFACE TO COMMONLY AVAILABLE VOTER DEVICES TO IMPROVE ACCESSIBILITY

Objective 1 – Enable voters to use their own personal computers to retrieve and mark ballots

Performance Measures: % of voters who choose online ballot delivery versus mail, email or fax, % of voters who retrieve online ballot from location other than their mailing address.

Objective 2 – Enable citizens to use personal mobile devices to register to vote.

Performance Measures: % of voters who choose this registration method compared to % using other methods.

Goal #4 : IMPLEMENT COMPREHENSIVE AUTOMATED DATA COLLECTION SYSTEM TO MEASURE ELEMENTS OF PROCESS

Objective 1 – Provide data needed to evaluate effectiveness of various elements of research project

Performance Measures: Utilization rates for various tools and services; % change from 2008 in FPCAs received, rejected (by reason), accepted; % change in ballots delivered, received, spoiled (by reason), counted; voter participation rates

Objective 2 – Provide data to enable measurement of progress towards Ohio’s strategic goals (presented in Management Approach).

Performance Measures: Voter participation rate, ballot return rate, % of ballots counted, voter satisfaction measures

To test the research hypothesis and accomplish these objectives, we have divided the project into six tasks. Each of these tasks can be viewed as a separate research module.

**Task 1: Define and Implement UOCAVA Outreach Program.**

UOCAVA voters are difficult to communicate with. Ohio’s UOCAVA population is fairly evenly divided between military service members and overseas citizens. This requires a broadly based communications plan. The objective is to make voters more aware of their voting rights and how to register and vote, as well as informing them of new channels of service being developed for this program so they will use them. OVF will draw on their extensive experience with the UOCAVA community to develop a communications plan, coordinate it with the relevant parties (e.g., FVAP, Department of State, overseas citizens groups, overseas and military press and local election officials), prepare communications materials for state and county distribution, execute the communications plan and monitor and report on voter response.

## **Task 2: Develop and Implement Evaluation Plan.**

The evaluation plan will be prepared by a research team headed by a well-known state university professor who is knowledgeable about Ohio election administration as well as UOCAVA processes. OVF will also support this effort. The team will develop the research questions and data collection plan. Upon approval of the plan by the Secretary of State's office, they will implement the data collection plan.

Once the website data collection tools are implemented, a bi-weekly review of key data points will be conducted. This will provide a sense of how the online tools and services are being utilized. Comparable data will be collected about the usage of traditional channels (e.g., by mail, email and fax) to get a comparison between the two. Traditional channel data will provide the baseline against which to assess the effectiveness of the new tools and services. Voter surveys and LEO interviews will also be utilized as data collection mechanisms. System logs and vendor reports will provide input for assessment of technical performance of the online ballot delivery system. Two reports will be prepared; one after the primary election in May and the other after the general election in November.

## **Task 3: Expand Voter-Facing Website Tools and Services.**

Ohio is already providing advanced online services to UOCAVA voters through an integrated voter-facing set of tools and services. The Ohio Overseas and Military Voter Services website, <https://ohio.overseasvotefoundation.org>, provides an established base for ongoing improvements in services for UOCAVA voters.

The services currently provided are: 1) Voter Registration and Absentee Ballot Application, 2) Vote-Print-Mail Federal Write-in Absentee Ballot, 3) Voter Help Desk, 4) Election Official Directory, 5) State Voter Information Directory, and 6) My Voter Account. This set of services has assisted thousands of voters since 2008, so they have proven to be useful and sustainable.

The Voter Registration and Absentee Ballot Application is the principal application in the existing suite of Ohio UOCAVA voter services. This online assistance tool streamlines the process of completing the FPCA, reduces voter errors and provides a legible completed form for LEO processing. We propose to add the capability to summarize the FPCA contents in a barcode that can be scanned to reduce the need for manual data entry by the LEOs. This is time-intensive and a potential source for error. LEOs are using barcode technology for other aspects of their work, so this will build on technology already in place. This is a one-time development effort which will be sustainable because it reduces LEO workload. It is also technology that can easily be adopted by other jurisdictions.

We also propose to develop a mobile registration application for iPhone and Android mobile devices to make this basic voting participation function more widely accessible. We expect this to build voter participation, especially among young voters who expect to have the ability to access government services in the same manner that they use for commercial services.

The Vote-Print-Mail FWAB wizard provides a zip code to voting district matching process to present the appropriate federal candidate list for each voter. The voter can complete the FWAB online and also receive complete instructions for returning the ballot including the LEO's mailing address as well as a pre-populated fax cover sheet. An element of the Task 1 Voter Outreach Program is to build voter awareness of the FWAB as a convenient "emergency ballot."

These two tools are currently supplemented with a range of supporting services to provide online registration and voting information. These include:

- Voter Help Desk which provides an extensive FAQ library and also allows voters to submit their own questions and receive personalized answers,
- Election Official Directory which provides a complete contact directory for every Ohio county, and
- State Voter Information Directory which provides Ohio election dates and deadlines and election materials transmission options specifically tailored to military and civilian UOCAVA voters.

We propose two major system developments: 1) to increase the availability of this suite of services to UOCAVA voters by enabling counties to provide these same services on their websites and 2) to expand and improve data collection capabilities for both state and county websites.

County Customization of Websites Voters have a choice of accessing either state or local websites to get voting information and forms. It is our goal to provide a more seamless experience for UOCAVA voters by enabling them to access the same services and information resources whichever site they choose. Making these capabilities more widely available throughout the state is a cost effective way to benefit from the initial investment of creating these capabilities. It also enables counties to share in the benefits of the state's initiatives while incurring only a minimal level of effort and cost.

Increased local jurisdiction adaptation of the Ohio UOCAVA voter services will be achieved through the development and provision of a "customization tool". This will enable counties to create their own sub-domain UOCAVA websites. They can use their own customized website theme and header as well as employ colors, banner and other features to match the look and feel of their local sites. In addition to this tool, we will also provide assistance to counties in modifying their sites. This will greatly expand the availability of the full range of UOCAVA voter services from many more website access points. This enables local election officials to take greater ownership of the UOCAVA voting process and will support their local outreach programs for their voters.

Website Reporting Dashboard We have the ability to collect some data with our current state website. However, to support the research aspects of this project we need more robust data collection and reporting features. OVF will develop a reporting dashboard that will provide real-time access to data and the ability to perform cross tabulation of aggregate data. An interface to define and schedule regular reports will be added. These capabilities will enable us to monitor utilization of various web services as the project progresses as well as support aggregate reporting of findings after the primary and general elections. We will also be able to collect voter demographics which are key to analyzing voter behavior. Every county that adds a UOCAVA page to their website will have the same data collection capabilities so we will have statistics for a large sample of Ohio UOCAVA voters.

#### **Task 4: Develop Ballot Data Translation Tool**

To provide for efficient online delivery of ballots, all of the ballot styles from the 88 Ohio counties have to be stored on a single server. In addition, they need to be converted to a format that can be delivered and marked online. There is no common format for ballot data among the

six election management systems used throughout the state. A ballot data translation tool is required to convert ballot data from the native format used by each election management system into a common format for online ballot delivery. It must also enable translation of the online ballot format back to native formats so the bar code of the vote selections can be scanned by the existing Ballot on Demand printers. This tool will be based on the IEEE P1622 Working Group common data format standard and produce an online ballot that is 508 compliant. The tool will be tested with all six election management systems and three voter registration systems using both primary and general election ballots to ensure that all ballot data, formatting and other features are translating correctly.

### **Task 5: Develop and Implement Online Ballot Delivery and Automated Transcription System**

The online ballot delivery and automated transcription system must support the following features:

- 508 compliant
- Capable of supporting multiple languages
- Linking of voter to correct ballot style
- Online ballot presentation with online marking
- Provides all mandatory ballot presentation capabilities, e.g., candidate rotation, straight party voting
- Prevents overvoting, provides undervote warning
- Ensures no vote selection data is retained on voter's computer
- Provides bar coding of vote data to enable automated ballot transcription
- Collects data on system utilization, voter experience and system performance

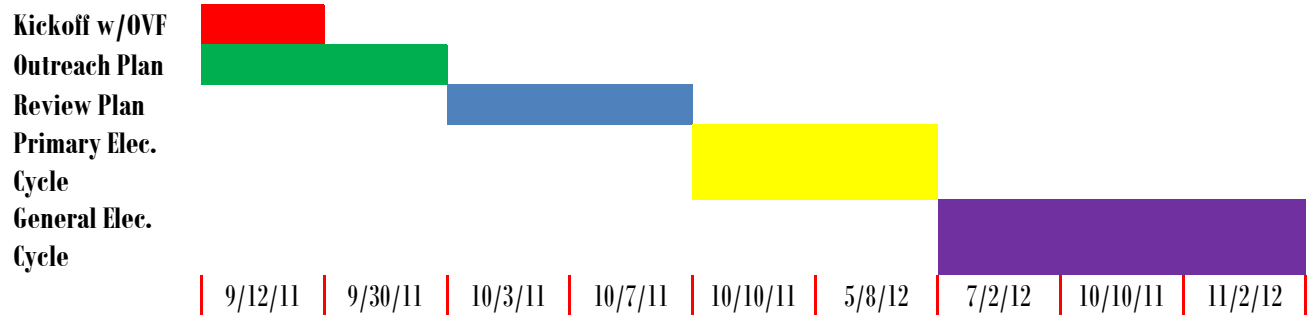
This task will include upgrading Ohio's three voter registration systems to enable EML/XML data transfer of the data elements needed to link voter with correct ballot style. The system will go through acceptance testing before it will be used in an election.

### **Task 6: Administer System for 2012 Elections**

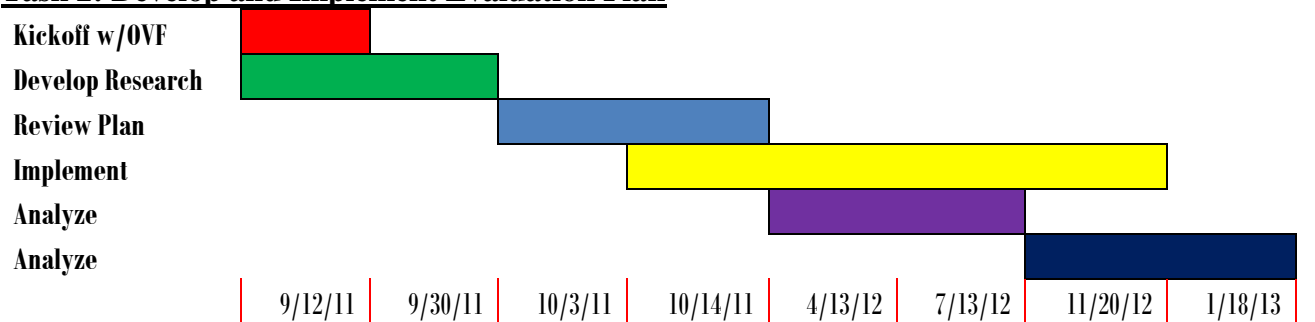
After validation of the ballot data translation tool and acceptance testing of the online delivery system, the system vendor will work with the counties to create and proof the ballots for the primary election. When ballot proofing is done, the election will be loaded on the online ballot server and a system readiness test conducted. The vendor will administer the system during the 45 day UOCAVA voting period through post election activities. The vendor will provide 24/7 help desk support for county election offices and voters and maintain a log of queries and how they were resolved. At the conclusion of the election, the vendor will provide the data reports and analysis specified by the evaluation team. The same process and support activities will be followed for the general election. In addition to providing data to the evaluation team, the vendor will conduct an analysis of overall system performance for both the primary and general elections after the general election.

### 3) Schedule & Milestones (2 pages)

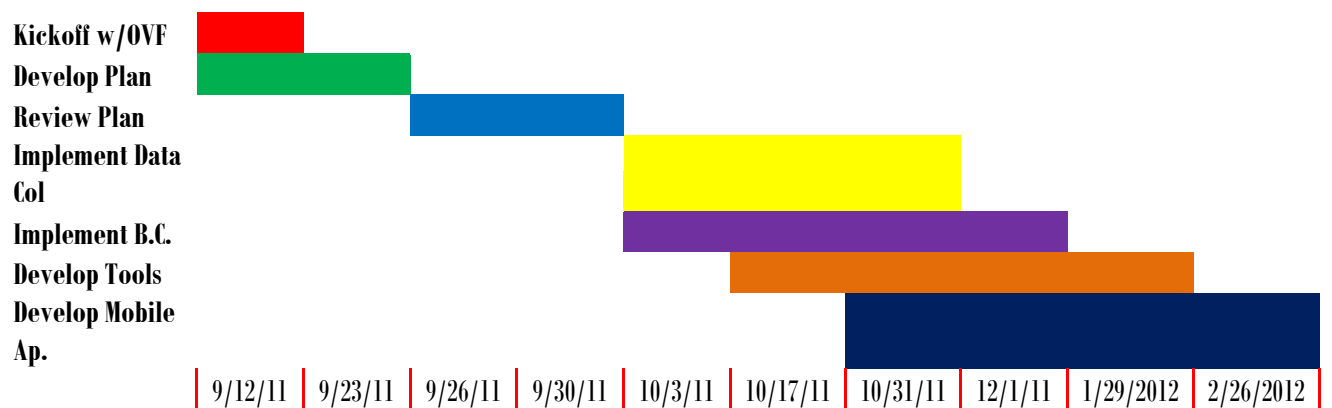
#### Task 1: Define and Implement UOCAVA Outreach Program



#### Task 2: Develop and Implement Evaluation Plan



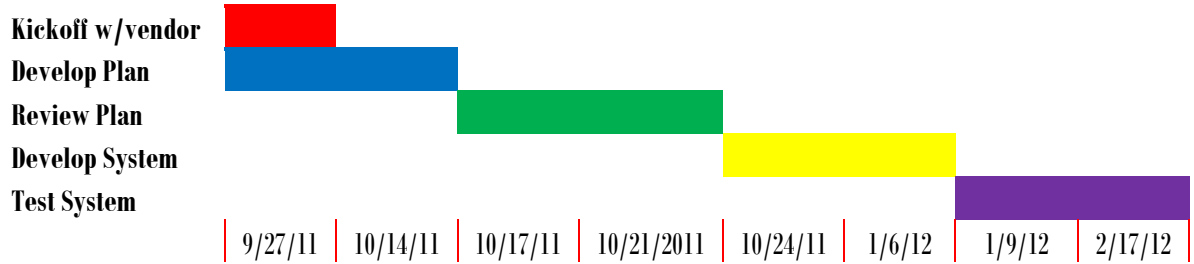
#### Task 3: Expand Voter-Facing Website Tools and Services



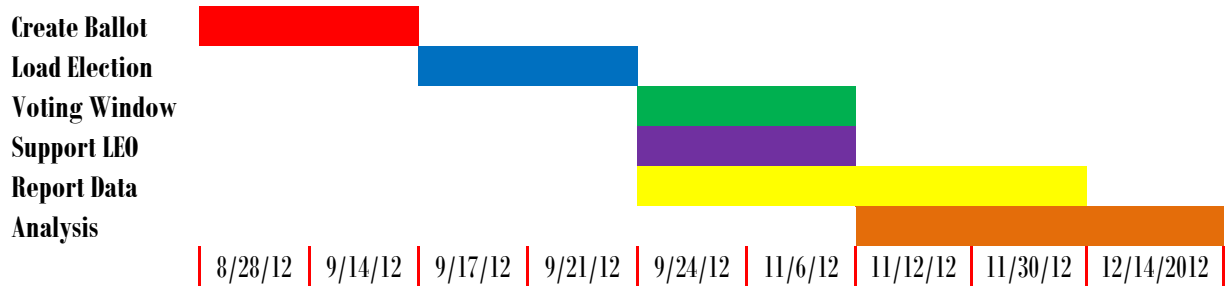
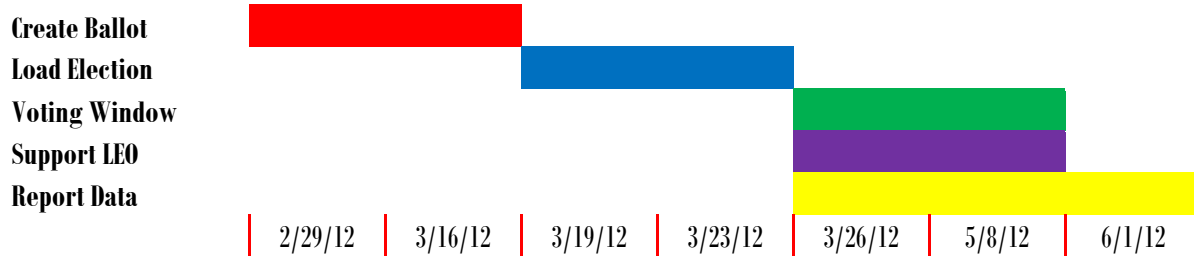
**Task 4: Develop Ballot Data Translation Tool**



**Task 5: Develop and Implement Online Ballot Delivery and Automated Transcription System**



**Task 6: Administer System for 2012 Elections**



#### **4) Reports (not included in page count)**

Programmatic and Financial Progress Reports: The Secretary of State's office will submit periodic progress reports to FVAP to report on how the research effort is proceeding and budget status. Each supporting contractor will be required to submit monthly progress and financial reports to the project manager.

Data Collection Points Reports: Website data collection reports will be produced every two weeks. These will provide statistics on voter utilization of the various online tools and services provided through the website. This will include data on items such as number of online FPCAs and FWABs created, number of online ballots requested, number of voter questions submitted to the help desk, voter demographics, number of site visits, time spent on site, page views. Comparable data on usage of traditional channels (e.g., by mail, email, and fax) will be reported monthly.

Final Report: We plan to deliver two project evaluation reports. The first will report on the research findings through the primary election in May. The second will report on the findings for the period from the primary to the general election in November. The second report will also provide a retrospective evaluation of the entire project. Both reports will address each of the goals and objectives discussed above.

Contractor Reports: In addition to the reports described above, the following is a list of other reports that will be produced by task:

Task 1 - Communications Plan, Analysis of Outreach Program Effectiveness

Task 2 –Evaluation Plan

Task 3 – Project Plan for Development of Voter-Facing Website Tools and Services; documentation for county customization tool, mobile voter registration application

Task 4 – Documentation on Ballot Data Translation Tool

Task 5 – Project Plan for Implementation of Online Ballot Delivery System, System Acceptance Test Results

Task 6 – Summary of LEO Help Desk Items and Resolution (primary election), system logs

Task 7 – Summary of LEO Help Desk Items and Resolution (general election), system logs, analysis of overall system performance

## **Management Approach (8 page limit)**

### **1) Project Team**

The project manager for the State of Ohio will be Matthew Masterson, Deputy Elections Administrator, Office of the Ohio Secretary of State. Mr. Masterson will be supported by a team with years of experience providing cutting edge technology and research tools to UOCAVA voting solutions. See attachment at end of management section for resumes and curricula vitae for all key personnel. A military voting liaison position has recently been added to the staff who will also support this effort. The Secretary of State's office will collaborate closely with county election administrators to ensure this statewide project to make voting more accessible for UOCAVA voters will place very little burden on the local administrators.

For several years the Secretary's office has worked with Overseas Vote Foundation (OVF) to improve our online UOCAVA services. OVF will support this research effort by assisting us in developing enhanced online tools and services as well as implementing a robust automated data collection capability. A solicitation for vendor support for online delivery of blank ballots and ballot tracking will be issued in early August. Based on Ohio's market research there are several firms with the capability to supply and/or develop the required electronic tools and provide other support services necessary to implement and evaluate the proposed research. Project evaluation will be conducted through the collaboration of OVF, an organization whose surveys and other research have yielded significant insight into the UOCAVA community and a state university with in-depth knowledge of Ohio election administration practices.

### **2) Strategic Goals**

Ohio's strategic goals for UOCAVA voting are:

- to ensure that all Ohio UOCAVA voters are fully informed of their voting rights
- to enable UOCAVA voters to achieve the same success rate as domestic absentee voters
- to provide a UOCAVA voting process that is easy to use and accessible for voters
- to proactively monitor achievements, identify areas for further improvement, and re-evaluate goals in light of evolving technology developments and legislative mandates

Ohio has instituted a number of measures pursuant to these goals: 1) adopted OVF tools to provide a user friendly website interface that makes it easier for voters to get the information they need to complete the FPCA and FWAB; 2) enabled UOCAVA voters to submit FPCAs by mail, fax or email and receive blank ballots by mail, fax and email; 3) implemented the Uniformed Services and Overseas Absent Voter Ballot Tracking system to allow voters to track the status of their ballot, and 4) added online data collection capability to track how UOCAVA voters utilize these tools.

These efforts have resulted in worthwhile improvements in UOCAVA service for minimal cost. But they are only the beginning of a greater push to better serve UOCAVA voters. Ohio's proposed research targets improvements for the end-to-end processes supporting UOCAVA voting – from initial voter registration through tabulation.

### **3) Definition of Research Project**

Post-election surveys conducted by FVAP, EAC and others, as well as our own LEO experiences, have identified the following problem areas:

1. UOCAVA voter awareness – lack of knowledge of voter rights, election information, and key deadlines; inability to track status of transactions
2. Voter registration and absentee ballot request – difficult to use, errors in completing and submitting FPCA
3. LEO processing of FPCAs – incomplete FPCAs, illegible FPCAs, communicating with voters
4. Delivering blank ballots to voters – transit time, ease of access, flexibility to receive ballot from different location than mailing address
5. Ballot marking – selecting too many candidates, improper marking, not completing
6. Use of FWAB – lack of voter awareness, availability of form and candidate information, difficult to use
7. LEO processing of returned ballots –privacy of voter’s selections, manual transcription workload, transcription errors

Our research hypothesis is that providing easy to use online access to voter information resources, combined with tools to reduce voter errors and a flexible and predictable ballot delivery process, will result in a higher success rate (defined as % of ballots counted) in the near term for those already participating and over time will increase the participation rate. The research strategy is to develop a coordinated suite of voter and LEO tools specifically targeting these known problems. We will develop detailed process descriptions and define performance measures to evaluate the contribution of these tools towards reducing the occurrence or completely eliminating these problems. This will be supported by a comprehensive data collection program to monitor the usage and performance of these tools, to evaluate their effectiveness, to identify other potential areas for future improvement, and to further streamline those tools deemed to be effective so they can be sustained by the state and counties.

The state UOCAVA website will be configured to collect statistics on all voter activities such as viewing voter information pages or downloading an FPCA. Voter history data recorded in the voter registration database will be analyzed to identify the number of successful/unsuccessful registration applications, absentee ballot requests, and ballots returned and counted along with the reasons for the failures. System logs and voter and LEO surveys are additional sources of evaluation data. Section 2) Goals and Objectives in the Technical Approach section summarizes the research goals and objectives and provides examples of the performance measures that will be used to evaluate the success of the project. The evaluation plan developed in Task 2 will lay out the research strategy in detail. In addition to evaluating the effectiveness of the piloted tools, these measures will also help us assess how well we are progressing towards achieving Ohio’s strategic goals.

### **4) Proposed Process Improvements to be Examined**

**Voter-Facing Website Tools and Services.** The availability of automated assistants, or wizards, makes FPCA completion easier for the voter and greatly facilitates the use of the FWAB. These

website tools will include reaching to the county level to create county specific voter facing interfaces that would allow the voter a one stop shop for UOCAVA voting information. Local election offices deliver the services that make the electoral process work. The local election official is the voter's gateway to voting participation and the primary recipient of voter communications. It is important for LEO websites to provide clear and easy to find information about the voting process to promote voter awareness and facilitate UOCAVA participation.

**Automated FPCA Transcription.** When the voter completes the FPCA on-line, the information can be captured in a bar code. When the FPCA is received by the LEO, the bar code can be scanned to directly enter the data into the voter registration pending file. This eliminates the need for time consuming and error-prone manual data entry.

**Mobile Voter Registration Application.** The rapid adoption of smart phones by the general population is changing the public's expectation for access to government services comparable to the revolution that occurred when Internet access became ubiquitous. Enabling voters to use their mobile devices to submit voter registration and ballot request forms will bring Ohio's customer service channels up-to-date with current public access technology.

**Ballot Data Translation Tool** For efficient online delivery of ballots, all Ohio ballot styles have to be stored on a single server. They also need to be converted to a format that can be delivered and marked online. Developing a data translation tool based on the IEEE P1622 common data format standards will facilitate the movement of data back and forth between the county election management and voter registration systems and the online ballot delivery system. This tool will be applied for the 2012 elections and continue to be used for future elections. If county election management or voter registration systems are modified in the future, this tool will be updated to accommodate these changes to maintain its usefulness. The development of this tool will provide valuable insight into the practical issues that arise when trying to devise a common denominator for multiple proprietary formats.

**Online Ballot Delivery System with Automated Ballot Transcription.** The use of email and fax makes ballot delivery faster and more predictable than the mail. But these transmission methods add processing steps for both voters and election officials. In addition, fax technology is not readily accessible for voters. In general it has been replaced by electronic methods such as web downloads that do not require special equipment or manual intervention. Adopting this method of blank ballot delivery will greatly streamline the process for both voters and LEOs. This delivery method provides a high degree of certainty that the voter will receive his ballot since he must take an action to retrieve it. It also provides flexibility for the voter to download a ballot at a convenient time as well as from a location other than the mailing address on file with the LEO. This can be a very useful feature for military service members with unpredictable duty assignments.

When a voter prints, marks and returns his ballot, the receiving LEO has to transcribe the votes manually to a ballot that can be scanned by the tabulation device. This process is time-consuming, prone to error and potentially compromises the privacy of the ballot. When the voter marks his selections online, this information can be electronically captured in a bar code. This enables the LEO to automate the transcription process by using a ballot on demand printer to rapidly scan the bar code and print the ballot. This significantly reduces processing time and

eliminates the errors that are inherent in a manual transcription process. Since the bar code is electronically scanned, the LEO does not have to look at the voter's marks, thereby preserving the privacy of the ballot. In addition, the submission of the marked paper ballot creates an audit trail that can be used for audits of the barcodes and used in the event of a recount.

## **5) Project Management**

Management of the project will be directly under the supervision of the Ohio Secretary of State's office. All project tasks and budget management will be overseen by the SOS's project manager. The project team has a great deal of experience in the management of federal grants. The State of Ohio has a grant management program for tracking and accounting for the use of federal grant monies.

Contractors will be required to submit project work plans to the project manager for approval. These plans will be used to track actual work progress against scheduled work progress. Frequent technical reviews will be conducted throughout the design, build, and implementation steps of each task as appropriate. Acceptance testing will be conducted to ensure that all system enhancements and new system developments perform as required. Contractors will be required to submit monthly progress reports to document their progress as well as report on budget expenditures.

## **6) Risk Management**

There are several elements in our risk management strategy:

1. Develop a uniform statewide system that provides a common set of tools for voters and election officials. A statewide system will provide the same capabilities for UOCAVA voters from every county – small and large. It enables the development of a common set of procedures and training for local election officials. It simplifies system support requirements which contributes to the sustainability of the improvements over time.
2. Use low risk, mature technology that is secure and scalable. We are introducing automated tools that LEOs and voters will find easy to use, that do not require a lot of training, and that are low maintenance.
3. Pay attention to LEO needs. Local election officials always find a way to get the job done even when more is required of them and resources are cut. We are proposing to introduce tools for LEOs that will substantially reduce their manual processing workload, reduce error rates and gather the data needed to monitor pilot project success and to respond to federal survey requirements. The Ohio Secretary of State's office already has infrastructure in place to work directly with counties in receiving input and providing training on the tools to be implemented. Specifically the SOS office already utilizes tools such as survey monkeys and webinars to ensure that local election offices are provided feedback opportunities and education on SOS initiatives. Local election offices respond very positively to these opportunities with survey response rates and training attendance being extremely high.
4. Be proactive in notifying UOCAVA voters of these new tools. As a general rule, previous UOCAVA pilot projects have not attracted large numbers of participants.

This is due in part to the fact that UOCAVA voters are all over the world, so they are a difficult group to communicate with. Having a significant number of voters participating is essential for generating meaningful research data. Ohio's UOCAVA voters are pretty evenly divided between U.S. and overseas-based military and overseas civilians. We will develop a multi-channel strategy to get the word out to our voters. We plan to utilize the communications capabilities of FVAP and DoD and the Voting Assistance Officer structure to reach active duty military and dependents. We will promote the project on our state and county webpages, employ social media and communicate directly with voters where possible. We will also work with the U.S. Department of State and organizations such as OVF and overseas citizens groups to reach out to overseas civilians. It is our expectation that streamlining the UOCAVA voting process, providing automated voter assistance tools and improving the overall voting success rate will motivate dropout voters to re-engage in the electoral process.

The following are the principal project implementation risks and our mitigation approach:

1. Developing a ballot data translation tool that will work with six election management and three voter registration systems supported by 6 vendors is a complex task. This poses a schedule and cost risk for this particular task. It also poses a schedule risk for the online ballot delivery system task since this is a critical path activity for creating ballots for that system.

Mitigation Approach: Select a contractor with prior experience in translating proprietary election management system (EMS) formats into format for online delivery. Conduct in depth bi-weekly progress reviews. Engender cooperative engagement with EMS and VR vendors.

2. Automated FPCA transcription will be a new procedure for LEOs and will require some modification of county VR systems.

Mitigation Approach: Provide clear procedural documentation and training for LEOs. Begin VR system upgrades immediately upon contract award. Conduct bi-weekly progress reviews.

3. Implementation of an online ballot delivery system with automated ballot transcription will involve modifying several LEO procedures.

Mitigation Approach: Work with LEOs to revise procedures. Provide clear documentation and training on new procedures.

4. Enlisting sufficient numbers of voters to use new tools and services is critical for research. Mitigation Approach: Conduct a vigorous and comprehensive voter outreach campaign. Voters who continue to use traditional channels will serve as a control group for comparative evaluation between new online channels and mail, fax and email channels.

The following are potential system security risks and our mitigations approach:

1. Denial of service attacks on the UOCAVA website server or online ballot delivery server could disrupt election operations.

Mitigation Approach: Providing the same tools and services on state and county websites dilutes the impact of a DoS attack against any single server. The 45 day UOCAVA voting period provides some tempering of impact of a DoS attack unless it occurs in the last few days of the voting period. While somewhat of an inconvenience voters can try the system again after service has been restored.

2. The retention of ballot data on the voter's computer could potentially be a risk to ballot privacy, especially in scenarios where voters might be sharing the use of a computer.

Mitigation Approach: The online ballot delivery system is required to erase all ballot data from the voter's computer. This feature will be thoroughly tested to ensure the requirement is met.

3. Scanning bar codes to perform automated ballot transcription is expected to protect ballot privacy because the LEO does not have to read and manually transcribe the voter's choices. However, there may be other privacy concerns raised by barcoding. The submission of the marked paper ballot creates an audit trail that can be used for audits of the barcodes and used in the event of a recount.

Mitigation Approach: We plan to examine all the technical and procedural aspects of this transcription method to identify any remaining privacy issues.

4. The availability of multiple voting channels increases the possibility of voters submitting more than one ballot and having more than one ballot counted. Delivery of ballots by electronic transmission methods is not amenable to traditional paper ballot accounting practices.

Mitigation Approach: Maintaining accurate voter history records and performing rigorous absentee ballot reconciliation prior to tabulation can reduce the possibility of counting more than one ballot per voter.

## **7) Current and Pending Project Proposal Submissions**

None.

## **8) Qualifications**

Resumes and curricula vitae for all key personnel and consultants are.

## Evaluation Criteria Compliance Table

### FACTOR 1 – SIGNIFICANCE

- Research covers all stages of UOCAVA process. *[Technical Approach Goal #2; Tasks 1, 3, 4, 5]*
- Online FPCA and FWAB wizards reduce voter errors. *[Task 3]*
- Mobile registration application increases number of registrations. *[Task 3]*
- Bar-coded FPCAs and voted ballots reduce LEO errors, protect voter privacy. *[Tasks 3, 5]*
- Online ballot delivery improves ballot delivery success rate, reduces ballot transit time. *[Task 5]*
- Online ballot marking reduces voter error and number of spoiled ballots. *[Task 5]*

### FACTOR 2 – SUSTAINABLE

- Bar-coded FPCAs reduce LEO workload and error rate, utilize in-place technology, continued use requires only minimal system maintenance. *[Task 3]*
- Bar-coded voted ballots reduce LEO workload and error rate, continued use requires only minimal system maintenance. *[Task 5]*
- Online ballot delivery reduces LEO workload, saves ballot printing and mailing costs, continued use requires only minimal system maintenance. *[Task 5]*
- Data collection tools support federal reporting requirements, continued use requires only minimal system maintenance. *[Task 3]*
- Ballot data translation tool will expedite process of creating electronic ballots for future elections *[Task 4]*

### FACTOR 3 – IMPACT

- Statewide system available to all Ohio UOCAVA voters. *[Technical Approach Goal #1]*
- Addresses all stages of UOCAVA process. *[Technical Approach Goal #2; Tasks 1, 3, 4, 5]*
- Produces products and processes that are reusable by other jurisdictions: use of bar-coded FPCAs, use of bar-coded voted ballots, ballot data translation tool; mobile registration application; website tools and services for voters; voter communications strategy. *[Tasks 1, 3, 4, 5]*

### FACTOR 4 – STRATEGIC APPROACH

- Testable hypothesis, research objectives and performance measures defined. *[Technical Approach]*
- Effective risk management strategy. *[Management Approach]*
- Statewide program covers all stages of UOCAVA process. *[Technical Approach; Tasks 1, 3, 4, 5]*
- Voter outreach program implements a consistent statewide strategy, engages partners (e.g., FVAP, overseas citizens groups) to inform voters about project to generate broad participation; monitors and evaluates success of various elements in recruiting voters (e.g., websites, social media, print, in person). *[Task 1]*

- Comprehensive evaluation plan documents research questions, data collection and analysis methodology; managed by professor who is expert on Ohio election administration in collaboration with OVF, a recognized leader in UOCAVA research. *[Task 2]*

#### **FACTOR 5 – INNOVATION**

- Use of bar-coded FPCAs and ballots to reduce LEO data entry, reduce errors, preserve voter privacy. *[Tasks 3, 5]*
- Ballot data translation tool based on IEEE common data format standards can be adopted by other jurisdictions using any of the six election management systems used in Ohio. *[Task 4]*
- Mobile device registration application can be replicated by any jurisdiction. *[Task 3]*
- Voter website tools and services, county customization tool can be replicated by any jurisdiction. *[Task 3]*
- Voter outreach program can be replicated by any jurisdiction. *[Task 1]*
- Online ballot delivery system can be replicated by any jurisdiction. *[Task 5]*

#### **FACTOR 6 – SCALABILITY**

- Statewide system improvements available to over 60,000 Ohio UOCAVA voters. *[Technical Approach Goal #1]*
- Use of common off-the-shelf technology makes solutions usable by any jurisdiction. *[Technical Approach Goal #3]*
- Use of common data format standard can be applied by any jurisdiction. *[Task 4]*
- Use of 508 standard makes website tools and services, online ballot delivery system accessible to broad range of voters. *[Tasks 3, 4, 5]*

#### **FACTOR 7 – COLLABORATIVE**

- Statewide system developed in collaboration with counties. *[Technical Approach, Management Approach]*
- Voter outreach program developed in collaboration with counties; materials developed for county use. *[Task 1]*
- Website tools and services are available to all counties to incorporate in their websites. *[Task 3]*
- County customization tool, technical assistance provided for counties to upgrade their websites. *[Task 3]*

#### **FACTOR 8 – COST BENEFIT ANALYSIS**

- See Budget Proposal for Return on Investment/Cost Benefit Analysis.

## Resumes & Curricula Vitae for Key Personnel

### MATTHEW V. MASTERSON

#### PROFESSIONAL EXPERIENCE

**Ohio Secretary of State**, Columbus, OH (May 2011, Present)

*Deputy Elections Administrator*

- Agency lead for Voting Systems testing and certification.
- Manage agency efforts to fully implement MOVE Act and other technology to aid UOCAVA voters.
- NVRA compliance manager.
- Agency lead for development and implementation for the testing and certification of e-pollbooks.

**U.S. Election Assistance Commission (EAC)**, Washington, D.C. (August 2006-May 2011)

*Deputy Director* Testing and Certification Division (2008-Present)

- Lead the development and implementation of the federal government's standards and policies for developing and testing voting systems, known as the Voluntary Voting System Guidelines (VVSG). Including being responsible for review of guidelines for compliance with federal law and industry best practices.
- Provide legal analysis and support to division director in the creation of program policies and procedures.
- Direct supervisor to program computer engineers and support specialist.
- Review and approve division contracts as being compliant with federal contracting laws and agency policies.
- Acted as EAC spokesman for matters relating to voting equipment testing and certification, and test laboratory accreditation.
- Contracting Officer's Technical Representative (COTR) for first ever comprehensive threat analysis of voting systems.

*Attorney/Advisor*, Testing and Certification Division (2007-2008)

- Created program manuals that contain program policies and procedures for the testing, certification, and decertification of voting systems and accreditation of test laboratories, both of which were voted on and approved by the Commission.
- Manage testing engagements of voting systems applying for federal certification, from initial application through final certification.
- Serve as an expert in applying established laws, regulations, and policies related to the administration of federal elections, such as the Help America Vote Act (HAVA), National Voter Registration Act, Freedom of Information Act, and due process concerns

*Special Assistant and Council to Chairman Paul DeGregorio* (2006-2007)

- Maintained comprehensive knowledge of the HAVA and the missions, goals, objectives, programs, and functions of the EAC.
- Authored the *2006 Election Incidents Brief* for EAC commissioners.
- Assisted General Counsel in preparing the EAC's *2006 Election Crimes* report.

# Keith A. Cunningham

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## Professional Biography

### Employment

**Special Projects Manager** Ohio Secretary of State Columbus  
Ohio

1998-2011

**Director of Elections** Allen County Board of Elections Lima,  
Ohio

### Professional Affiliations

1998-present **Ohio Association of Election  
Officials** Columbus, Ohio

- President (2005)
- Trustee (2004-08)
- Education Committee Chair (2004)
- Ohio Statewide Database Committee member (2002)
- Ohio Election System Study Committee member (2001)

2000-Present **The Election Center** Houston, Texas

- CERA Certificated (2004, 2007)
- Board of Directors (2007-present)
- 2004 Election Reform Task Force(2005)
- Chair-Benchmarking Task Force (present)
- Co-chair Professional Education Committee (present)

2007-2011 **Member-Ohio Bd. of Voting  
Machine Examiners** Columbus, Ohio

2006-Present **US EAC Board of Advisors** Washington, DC

- Vice Chair (2009-present)
- Election Recounts working group (2007)
- Chair Voting System Standards Committee (2008-present)

**Patricia A. Wolfe**  
Ohio Secretary of State's Office  
Elections Administrator

Worked in the elections profession for over 27 years.

Served eight years with the Coshocton County Board of Elections in the positions of Director and Deputy Director.

In 1992, joined the Ohio Secretary of State's office and has served in the positions of Assistant Elections Administrator, Director of Elections and current position of Elections Administrator.

Certified Elections/Registration Administrator (CERA) since August 1998.

Former chair of the Professional Educational Program Committee, and former member of the Professional Practices Committee and the Ethics Committee of the The Election Center.

In 1998, named an honorary Secretary of State by Secretary of State Bob Taft in recognition of attaining CERA status (only 3<sup>rd</sup> state elections administrator in the nation to receive the CERA status) and for her dedication and commitment to furthering her election knowledge and maintaining high ethical standards in the performance of election duties.

## **CAROL A. PAQUETTE**

Ms. Paquette has over 40 years of management and analysis experience in the areas of program and policy analysis, legal and regulatory analysis, process reengineering, and program management of the design and development of special purpose information systems. She has managed 29 projects, including twelve system development efforts and a significant number of process improvement and policy analysis studies. Her management experience spans both private and government sectors. She has authored or co-authored more than 65 technical reports.

### **EDUCATION**

Ms. Paquette received a B.A. *cum laude* in Political Science from West Virginia University (1964) and a J.D. from Georgetown University Law Center (1980). She has participated in continuing legal education courses in government contracting, contract litigation, Federal Acquisition Regulations, fiscal management, appropriations law, and negotiation techniques, variously sponsored by Georgetown and Harvard Law Schools, the American Bar Association, the D.C. Bar Association, and the Virginia Bar Association. She completed graduate level courses in policy analysis, program evaluation, government budgeting, and organization theory at George Washington University. Ms. Paquette has attended numerous seminars and short courses on business process reengineering, systems analysis and design, communications systems, decision support and management information systems.

### **AWARDS**

She was awarded the DoD Civilian Meritorious Service Medal in 1988 for her contributions to the improvement of national security management systems at the White House, and the Office of the Secretary of Defense Medal for Exceptional Civilian Service in 2001 for her work on the Voting Over the Internet project.

### **EXPERIENCE**

#### **UOCAVA Systems Consultant (2006 – present)**

Ms. Paquette is currently assisting the Election Assistance Commission (EAC) in the review and analysis of documentation for the preparation of a global survey of Internet voting projects. She recently assisted with drafting the EAC white paper, “Uniformed and Overseas Citizens Absentee Voting Act Registration and Voting Processes,” published in April 2011. She participated in the EAC working group that developed the UOCAVA pilot project testing requirements and reviewed NIST white papers and other documents pertaining to UOCAVA voting standards. She has also provided assistance to several state election offices in the preparation of UOCAVA pilot project legislation.

#### **Operation BRAVO Foundation (2007 – present)**

**Director**

Ms. Paquette is the founding director and Secretary of Operation BRAVO Foundation (OBF), a 501(c)(3) public charity with the mission of assisting U.S. overseas civilian and military voters by engaging in research and educational initiatives to improve the absentee voting process. She is currently managing the OBF tasks for the Military Heroes Initiative grant. OBF is partnered with the Information Technology and Innovation Foundation and Georgia Tech Research Institute. The purpose of this research grant is to improve voting technology and processes for military service members who have sustained severely disabling injuries in the Global War on Terrorism. OBF is analyzing voting assistance practices and election administration procedures to identify the current baseline. Based on this analysis, recommendations will be developed for ways to potentially extend the scope of assistance available. In addition, recommendations may also be made for modifications to election administration practices to better accommodate the needs of these voters.

Ms. Paquette previously served as the OBF project manager for the 2008 Okaloosa Distance Balloting Pilot. This demonstration project examined the operational feasibility and security of a remote electronic voting system operated in three overseas locations. Her duties included working with state and local election officials to define the legal and administrative requirements for the project as well as the testing requirements for the voting system. She provided management oversight for the system vendor's work of tailoring their remote voting product to provide the additional capabilities required by the State of Florida. She prepared the project evaluation questionnaire and assisted in developing operating procedures.

#### **Election Assistance Commission (2004 – 2005)**

Ms. Paquette served as the Interim Executive Director of the EAC when the agency was first getting organized. Among other duties she provided oversight of the TGDC-NIST voting system standards work. She coordinated with NIST and NASED to finalize a plan for the transfer of test lab certification from NASED to NIST. She also worked with these organizations and EAC staff to develop a strategy for transitioning the voting system testing and certification process from NASED to the EAC. When the permanent EAC Executive Director was selected, Ms. Paquette was assigned to manage the analysis and resolution of public comments received on the draft 2005 VVSG. She prepared issue papers for consideration and decision by the Commissioners and managed the completion of the final VVSG revisions based on the Commission's policy decisions.

#### **Federal Voting Assistance Program (1999- 2004) Program Manager, Electronic Voting Projects**

**Secure Electronic Registration and Voting Experiment (SERVE)** - SERVE was designed to be a large scale demonstration project using the Internet for registration and voting for absentee military service members and overseas citizens. The SERVE system was one of five worldwide finalists in its category for the 2004 Computerworld 21st Century Achievement Award. Ms. Paquette was the FVAP program manager for this Congressionally-mandated multi-state project. Her responsibilities were creating, communicating and maintaining the vision and objectives of the project; providing project leadership and credibility with the stakeholders (state and local election officials, state and federal legislative staff, senior officials in other DoD organizations

and other federal agencies, private sector groups and citizens); identifying, analyzing and resolving issues (policy, legal, technical, contractual, funding, political); and providing technical direction and oversight of the development, evaluation and independent testing teams. Just as system testing got underway, several computer scientists issued a press release alleging that the SERVE system was not sufficiently secure because it operated over the Internet, and should not be used for voting. DoD management felt this claim undermined public confidence in the system and could potentially cast doubt on the integrity of the election results. As a result the project was terminated before the system was fielded.

**Voting Over the Internet** - This groundbreaking project was the first time an Internet voting system was used to cast ballots that were counted in a presidential election. It was awarded First Place in the 2003 Excellence.Gov Awards. The registration application was cited as a best practice and important innovation by the Caltech/MIT Voting Technology Project. Ms. Paquette managed the design, implementation, testing, operation and evaluation of this pilot effort to assess the feasibility of maintaining the integrity and security of the absentee voting process using the Internet.

Prior to her engagement in UOCAVA voting systems work Ms. Paquette held a variety of research and project management positions in the private sector and the Department of Defense.

**Susan Dzieduszycka-Suinat**  
**President and CEO, Overseas Vote Foundation**  
[susan@overseasvotefoundation.org](mailto:susan@overseasvotefoundation.org)

## **Current Organizational Activity and Key Experience**

### **Overseas Vote Foundation - Founder and Executive Director, 2005 – present**

Ms. Dzieduszycka-Suinat is President, CEO and cofounder of Overseas Vote Foundation (OVF), [www.overseasvotefoundation.org](http://www.overseasvotefoundation.org), a nonprofit, nonpartisan organization established in 2005 that helps overseas and military voters participate in federal elections by providing public access to interactive web services. 4.75 million individuals visited OVF's 17 voter services sites in 2008.

Ms. Dzieduszycka-Suinat works for the foundation full-time and manages OVF's strategic planning and operations including technical development and oversight of staffing, research, marketing, and alliance programs. She spearheaded the functional specification, development and launch of the complete suite of OVF Internet-based voter services available online today.

OVF's suite of software applications is the first of its kind within the U.S. and a direct outcome of Ms. Dzieduszycka-Suinat's vision for overseas and military voter services that work within today's security paradigm. Her understanding of the real and practical needs of overseas and military voters coupled with her ability to translate these needs into logical, easily accessed technology solutions is demonstrated in OVF's online presence.

- Management responsibility for OVF strategy and operations:
  - Planning, development, maintenance and support for OVF's seven integrated online voter services, reporting and backend content management systems
  - Organizational development – team building, staffing, monitoring, reporting
  - Revenue development strategy, grant-writing and applications
  - Assure appropriate legal review for all programs and activities
  - Capitol Hill and stakeholder relationship development
  - Press and promotional program development and implementation
- Key Accomplishments:
  - Built organization including Executive Board (10), Advisory Board (10), Operations Team (13), Regional Volunteer Team (35) and Alliance Partner Program (8).
  - Executed and published four post-election online voter surveys – the OVF survey has become a core part of the OVF program and the largest survey of its kind
  - Developed State Hosted Systems program which licenses the OVF voter services suites to seven states, helping to establish a usability standard in UOCAVA services

### **The Dream Plan, Marketing Consulting – Founder and Managing Director, 1999 – current**

Project management organization for small business entrepreneurs

Key projects include:

- **Overseas Vote 2004 Project Initiative: Product Development and Worldwide Marketing Program Manager**
  - Responsible for design, functionality, usability and maintenance of first-ever UOCAVA Internet-based voter registration system and supporting services

- Briefed development team and supported product development for accelerated 3-week timeline
  - Developed project and marketing plans and executed against them to register 80,000 UOCAVA voters in the 12 weeks prior to the 2004 election.
  - Staffed and launched Help Desk to support voters directly through Internet-base help desk services answering over 7,000 questions in the 12 week period
  - Managed approximately 50 person team in activities including, online promotion, link program, support, help desk, reporting and technical response issues
  - Responded personally to all public relations program initiatives and press interviews, and directed marketing communications efforts
  - Designed, promoted and executed events to support communications efforts
- **Corporate Identity and Websites and Marketing Development** for various firms including:
    - Grace Advisory venture capitol
    - Eyeshot Elements – graphics display system for advertising and promotion
    - Endeavors Technology, secure peer-to-peer networking software technology marketing development in UK and German regions

## Supporting Experience

### International Software Marketing

Thirteen years in software marketing with UNIX Leader Santa Cruz Operation (SCO)

Key roles included:

- OEM Marketing Manager, Europe, Middle East and Africa – responsible for partner marketing program development and execution. Accounts included, Compaq, IBM, Olivetti, Unisys, Siemens and HP
- Director of Marketing, France and Spain – responsible for entire marketing mix for regional subsidiary including press and public relations, channel marketing, training program marketing, advertising and promotional marketing activities
- North American Channel Marketing Manager – distribution channel marketing program development and execution with key channel partners. Managed 5-person core team.
- Technical Marketing Manager – supporting role to key sales staff and marketing development teams

**Education:** Bachelor of Arts, Environmental Studies, University of California, Santa Cruz; Marketing Program Certification in Organizational Development, Large-Scale Project Management and Marketing, University of California, Berkeley

**Citizenship:** American

**Languages:** Native English, fluent in French and German

**Other:** Lived overseas for 17 years; currently living in Munich, Germany with husband and two children

