

★VIRGINIA★
STATE BOARD
of **ELECTIONS**

Commonwealth of Virginia
State Board of Elections

Response to the

Defense Human Resources Activity - Federal Voting Assistance Program's
Electronic Absentee Systems for Elections Grants for States, Territories and Localities

Volume II – Budget Proposal

Title:

**Virginia Comprehensive UOCAVA Voter Life-Cycle Portal Project
and the Evaluation of Technology Options for Advanced UOCAVA Solutions**

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Contractors and Sub Recipients:
Microsoft Corporation
Democracy Live
Open Source Digital Voting Foundation
Scytl
ES&S

Proposed Period of Performance:
August 2011 – July 2016

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Submitted on: July 13, 2011

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The following pages provide the requested supporting details for the budget proposal for this project. Statements of Work, Work Orders and Budget Estimates are included.

- I. Statement of Work – Virginia State Board of Elections eBalloting Support
 - a. Microsoft Consulting Services Work Order 20110574

- II. Statement of Work – eBalloting Portal Integration and Implementation Support for Virginia State Board of Elections
 - a. Microsoft Consulting Services Work Order 20110616

- III. Statement of Work – Evaluation of Technology Options for Providing Advanced UOCAVA Solutions to Virginia
 - a. Budget Breakdown Categories

- IV. Virginia Voter Registration System Modifications

Virginia State Board of Elections eBalloting Support

Statement of Work

Prepared for

Virginia Board of Elections

Richmond, Virginia

07 June 2011

Version 5

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EXECUTIVE SUMMARY

This engagement will be performed in accordance with the Microsoft Service Line Offerings (SLO) SL1 Enterprise Strategy Projects. Please note, the aforementioned is an internal Microsoft designation for service catalog offering and is provided for Microsoft internal audit purposes only.

Microsoft and its subcontractor (Democracy Live) will perform the services identified below for you on a Time and Materials basis. Any dates provided are estimates only. Most of the services will be performed remotely (as a Cloud Offering) – while other services may be delivered at the place of performance identified on the cover page. Because we are performing the services under your direction, based on an estimated period of performance and fees, we do not warrant that any services deliverables will be completed or be satisfactory to you within the estimated period or fees.

WHY MICROSOFT

Microsoft Enterprise Services offers a single point of delivery and support through the entire IT lifecycle, from envisioning through day-to-day operations. Our consultants and engineers have the necessary technical, architectural, and project management skills to help mitigate risk associated with business and technical constraints and organizational diversity. We can often accelerate the rate of implementation by utilizing *prior project success* and *experience* gained through similar engagements. Our services team can provide technical, architectural, and overall project leadership expertise throughout the effort.

Our integrated team model is designed with the intent to help transfer Microsoft knowledge back to your project team members. Microsoft and our partner consultants assume the role of mentors and will structure this project with an anticipated goal to help transfer skills and knowledge to the Virginia Board of Elections' staff.

1 PROJECT OBJECTIVES AND SCOPE

1.1 Objectives

The Virginia Board of Election (“BOE”) wishes to provide an eBalloting capability to its overseas and military voters. This eBalloting capability will provide an optional mechanism for voters in the Commonwealth of Virginia to participate in elections. This balloting capability will be provided using the Democracy Live **LiveBallot™** (*Software as a Service*) solution.

LiveBallot™ provides state and local jurisdictions with a simple, turn-key electronic balloting solution specifically designed to meet the requirements of both the Uniformed and Overseas Citizens Absentee Voting Act (“UOCAVA”) and the Military and Overseas Voter Empowerment (MOVE) Act. **LiveBallot™**, now in its second generation, utilizes Microsoft’s state-of-the-art Azure cloud computing technology to deliver to our clients a web-based electronic ballot solution that is secure, cost-effective and easy to deploy. It has been proven in over 250 jurisdictions throughout the U.S.

Key objectives for this deployment include:

1. Provide a portal for citizens of Virginia to register to vote, determine their UOCAVA eligibility, complete an absentee ballot application and complete an absentee ballot if eligible.
2. Improve ballot access for Virginia’s UOCAVA voters, while at the same time, providing a positive solution/experience for the local election officials (General Registrars).
3. Provide a means for Virginia to deploy a “kiosk” version of the solution with deployed Virginia-based military units.
4. Provide a solution that Virginia can build upon in the future as legislative needs catch up with the available technology.
5. Provide an overall long term cost-effective solution for Virginia elections.
6. Provide analytical information regarding the usage of the solution.

1.2 Areas Within Scope

1.2.1 Envisioning Phase

The Envisioning Phase of this engagement consists of documenting your eBalloting requirements to allowing the configuring of the **LiveBallot™** SaaS solution. During this phase, we will perform the following tasks that allow us to identify your business requirements as they pertain to eBalloting:

- Provide demonstration workshop onsite of the **LiveBallot™ tool**
- Setup working group sessions to document your business and technical requirements
- Identify election file import requirements
- Identify onscreen instruction requirements for the Commonwealth of Virginia

- Identify user roles and associated permissions for the **LiveBallot™** tool
- Identify Return Ballot Packages and Custom Ballot Package forms requirements
- Identify requirements for statewide elections set-up and county inheritance of statewide data.

1.2.2 Planning and Development

The Planning/Development phase consists of the following activities:

- We will analyze the results from Task 1 and determine configuration setting for **LiveBallot™** tool
- Configure the tool to address election file import requirements
- Develop onscreen instruction requirements for the Commonwealth of Virginia based on requirements from the Envisioning Phase
- Setup user roles and associated permissions for the **LiveBallot™** tool based on identified requirements
- Create Return Ballot Packages and Custom Ballot Package forms requirements
- Setup the tool to support statewide elections set-up and county inheritance of statewide data (as appropriate)

1.2.3 Stabilization

Our partner (Democracy Live) will lead the deployment of the **LiveBallot™** solution into the production environment for pilot user access.

The Stabilization phase will consist of performing the following activities:

- We will conduct a test pilot for up to fifty (50) users in the production environment using the **LiveBallot™** tool
- We will conduct acceptance testing procedures to ensure that the requirements identified in the Envisioning Phase are satisfied
- Perform remediation configuration activities on the **LiveBallot™** tool to address any issues/problems uncovered during the pilot test exercise
- We will develop a Test Report that documents Acceptance Test procedures and resulting using the pilot test users.

1.2.4 Deployment and Operational Support

Our partner (Democracy Live) will lead the cutover of the **LiveBallot™** solution in the production environment for all potential users.

The Deployment phase will consist of performing the following activities:

- Execute operational test procedures from multiple remote locations to ensure the **LiveBallot™** is functioning properly

- Provide customer access to the tool to allow execution of administrative procedures and to run reports
- Provide operational support during an election to ensure the eBalloting solution is made available to Commonwealth of Virginia constituents.

1.3 Software Products / Technologies

Technology	Provided by
Windows Azure	Microsoft/Democracy Live
SQL Azure	Microsoft/Democracy Live

Table 1: Solution Software Required

1.4 Training and Knowledge Transfer

1.4.1 Knowledge Transfer

Informal knowledge transfer will be provided throughout the project. Informal knowledge transfer is defined as informal activities provided when Virginia State Board of Elections team members, associates, or contractors are in concert with Microsoft team members. This may include: whiteboard discussions, email threads, Live Meeting conference calls and facilitated meetings on technical topics. No deliverables or meeting summary will be provided for these sessions or activities.

1.4.2 Training

Democracy Live will provide training to Virginia State Board of Elections officials using a “Train the Trainer” approach. One training session will be provided for up to sixteen (16) people on-site at a customer-provided training facility. Customer will be responsible for providing client hardware for training. The training will last two (2) days on-site.

The Democracy Live training approach teaches the instructors how to train others on the LiveBallot voter facing application, as well as the administrative tools. The purpose of Democracy Live “Train-the-Trainer” exercise is to demonstrate how to successfully plan and conduct training events suitable for the appropriate audiences.

“Train-the-Trainer” includes, but is not limited to the following:

- Full knowledge of the LiveBallot System
- How to use the training documents
- How to show and tell the objectives in your training
- How to start and end your training sessions on time
- Customizing your training to the strengths/weakness of your trainees
 - Adjust training to meet the learners’ needs

- Create a training climate that encourages questions and participation

1.5 Areas Out of Scope

- We will not purchase or provided any hardware or software for this project
- Anything not excluded in this section and not listed in the above “Areas within Scope” is considered out of scope for this SOW.

2 PROJECT APPROACH, TIMELINE AND SERVICE DELIVERABLES

2.1 Approach

We will leverage the Microsoft Solutions Framework (MSF) to execute this SOW. MSF represents a proven solution development approach that provides for well-defined phases that take into account development of requirements, architectural design, detailed software design, software development, system testing, and managed release cycles.

Phases for the MSF solution approach that are involved in this project are shown below:

- **Envisioning:** Envisioning involves creating a business vision and defining an approach to bring the vision to reality.
- **Planning and Development:** Planning continues through the development of functional requirements and a project plan for the project.
- **Stabilization:** Microsoft Services will test the solution and make modifications as needed.
- **Deployment:** The Deployment phase includes deployment of the solution and final testing.

2.2 Key Microsoft Activities

Key Activities for Microsoft during the project will include the following:

- Kick-off and Vision and Scope meeting
- Define roles and responsibilities for you and Microsoft
- Key contacts for both Customer and Microsoft
- Outline roles and responsibilities
- Outline key information needed to complete the project
- Identify lead person for Virginia Board of Elections
- Identify other dependencies that will or could affect or impact the engagement, such as availability of resources and personnel
- Confirm project approach
- Build and confirm project plan. This is a shortened high-level project plan for the engagement that outlines the tasks to be completed
- Provide “Train the Trainer” training
- Provide on-going status information to the customer and to the Microsoft team via Weekly Project Status Reports - during Envisioning and Planning activities only.

2.3 Key Customer Activities

Key Activities for the Customer during this project will include the following:

- Function as lead in collecting information needed in the Envisioning and Planning Phases

- Provide environment information
- Provide the right personnel to assist with project activities
- Ensure availability of personnel (both Microsoft and Customer) and testing facilities
- Provide facilities for Microsoft personnel to work during the length of the project
- Provide an executive sponsor.

2.4 Estimated On-boarding Timeline

The project will be divided into two (2) primary groups of task activities. The on-boarding process is estimated to take no more than two (2) weeks. The eBalloting solution functionality will be provided for as long as the customer elects to use the LiveBallot system.

Phase	Duration ¹
Envisioning and Planning	Approximately 8 Weeks
Stabilization-Deployment	Approximately 4 Weeks
Operations	As determined by BOE
Total	Relative to the Start Date and the duration of Operations

2.5 Key Service Deliverables and Acceptance Process

2.5.1 Key Project Service Deliverables

The following is a list of the key project service deliverables that will be delivered within this SOW.

Project Phase	Service Deliverable Name	Service Deliverable Description
All Tasks	Weekly Status Report (To be provided during migration of users only)	Provides summary of tasks completed, tasks planned, hours worked , risks and suggested risk mitigation strategies
Stabilization Phase	Test Report	Documents Test Plan procedures used, test executed, test results and remediation recommendations.
Deployment Phase	Training Materials	Training materials to support delivery of “Train the Trainer” training of customer personnel.

2.5.2 Service Deliverable Acceptance Process

At specified milestones throughout the project, we will deliver completed project service deliverables for review and approval. Service deliverables shall be accepted or rejected within five (5) consecutive business days from the time of submittal for acceptance. Service deliverables shall be deemed accepted in the absence of review or response of acceptance within this specified time. The use or partial use of any service deliverable constitutes acceptance of that service deliverable. Feedback supplied after the review period will be evaluated as a potential change of scope and shall follow the Change Management Process outlined in this SOW.

The Service Deliverable Acceptance Process is described below:

- **Submission of Service deliverables**
The Microsoft Engagement Manager, or his designee, will prepare a Service Deliverable Acceptance Form and forward with the respective service deliverable to the Customer Project Manager, or Customer designee, for consideration.
- **Assessment of Service Deliverables**
The Customer representative will determine whether the service deliverable meets the requirements as defined in this SOW and that the service deliverable is complete. Additional work on, or changes to, an accepted service deliverable that are requested by the Customer will be managed through the Change Management Process.
- **Acceptance / Rejection**
After reviewing, the Customer will either accept the service deliverable (by signing and dating the Service Deliverable Acceptance Form) or will provide a written reason for rejecting it and will return the Service Deliverable Acceptance Form to the Microsoft team. If feedback from multiple Customer representatives is received, then the Customer Project Manager, or Customer designee, will consolidate that feedback before delivering it to the Microsoft team.
- **Correction of Service Deliverables**
Microsoft will correct in-scope problems found with the service deliverable and will address the correction of out-of-scope changes according to the Change Management Process. Microsoft will submit a schedule for making changes to the service deliverable within two (2) business days of receiving a rejected Service Deliverable Acceptance Form. Once Microsoft corrects all previously identified in-scope problems, the service deliverable will be deemed accepted following the acceptance wording outlined in the first paragraph of this section 2.3.2.
- **Monitoring and Reporting**
The Microsoft project team will track service deliverable acceptance. Updates on service deliverable acceptance will be included in the status report and discussed in the status meeting. Service deliverable acceptance issues that cannot be resolved will be elevated to the Project Steering Committee.

2.6 Project Governance Approach

2.6.1 Communication Plan

A formal process will be employed to facilitate communication during the project. There will be two (2) key vehicles for providing this communication: a weekly status report and a weekly status meeting.

- The Microsoft Project Manager, working in conjunction with the Customer Project Manager, will compile status reports with the frequency defined above for distribution to both Customer and Microsoft management.
- Meetings will be held with the frequency defined above to review overall status, the project schedule and open issues noted in the status report.

2.6.2 Issue/Risk Management Procedure

The following general procedure will be used to manage project issues and risks:

- Identify and document
- Assess impact and prioritize
- Assign responsibility
- Monitor and report progress
- Communicate issue resolution.

A mutually agreed upon issue escalation process will be defined at the outset of the project.

2.6.3 Change Management Process

During the project either party may request in writing additions, deletions, or modifications to the services described in this SOW (“change”). We shall have no obligation to commence work in connection with any change until the estimated fee and schedule impact of the change is agreed upon in a written Change Request Form signed by the designated Project Managers from both parties.

Upon a request for a change, we shall submit the change on our standard change Request Form describing the change, including the estimated impact of the change on the project schedule, fees and expenses. The Change Management Process that will be employed is defined below. Both parties agree to follow this process and to use the Change Request Form.

- Identify and document
- Assess impact and prioritize
- Estimate required effort
- Approve / disapprove
- Assign responsibility
- Monitor and report progress
- Communicate change resolution.

Within five (5) consecutive business days of receipt of the proposed Change Request Form, you shall either indicate acceptance of the proposed change by signing the Change Request Form or advise us not to perform the change. If you advise us not to perform the change, then we shall proceed only with the original services. In the absence of your acceptance or rejection, we will not perform the proposed change.

2.7 Project Completion

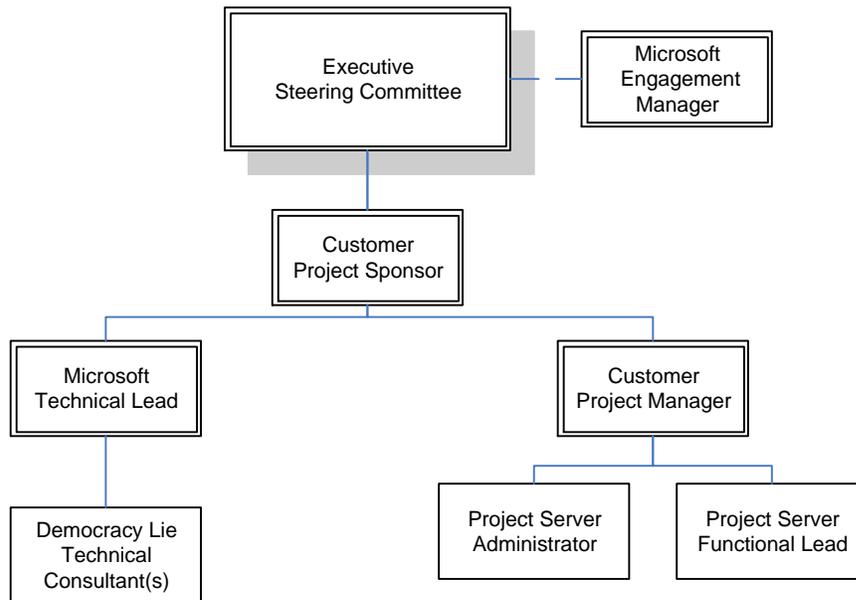
The project will be considered complete, when any of the following are met:

1. All of the service deliverables identified within this SOW have been completed, delivered and accepted or deemed accepted, including approved Change Request Forms;
2. The fee provisions of the Work Order have been met; or
3. This agreement is terminated pursuant to the provisions of the agreement.

3 PROJECT ORGANIZATION AND STAFFING

3.1 Project Organization Structure

This section identifies the overall project organization structure, reporting relationships, and key project roles and responsibilities.



3.2 Project Roles and Responsibilities

This section provides a brief overview of key project role responsibilities.

Role Name	Role Responsibilities
Senior Consultant	Conduct/deliver all technical activities related to this project
Engagement Manager	Ensure that project is on track and escalation of issues

4 GENERAL CUSTOMER RESPONSIBILITIES AND PROJECT ASSUMPTIONS

4.1 General Customer Responsibilities

Our delivery of the services are dependent on your involvement in all aspects of the services, your ability to provide accurate and complete information as needed, your timely and effective completion of the responsibilities as identified herein, the accuracy and completeness of the Assumptions, and timely decisions and approvals by your management. In addition to any Customer activities identified in the Approach section, you will perform the tasks, furnish the personnel, provide the resources, or undertake the responsibilities specified below.

- We will work with you to obtain workspace for each team member including desk, phone, network connection, internet access, print services, and PC space
- You will provide documentation required to successfully execute/complete this engagement are accessible and accurate.
- You will handle project risk mitigation
- You will name and make available as necessary for the duration:
 - A project leader (Client focal point)
 - A sponsoring manager or executive
 - Installation platform(s) system administrator(s)
 - Additional technical contacts who are participating in the installation and configuration
- You will assign at least one technical person during the implementation for the resolution of technical issues
- You will actively participate in the software installation and configuration
- You will provide as necessary, access to persons skilled in and knowledgeable of the Client hosted environment, including network topology and hosted server operating system configurations
- The Client Project Leader will participate in midpoint progress review meeting
- Network connections for servers and workstations
- Connectivity of the servers to the Internet (for portal access to Web content)
- Assigned static IP addresses for each server
- Addition of server hostnames to Client Domain Name Server (DNS)
- Internet access for our consulting personnel working on site
- Displays/keyboards/mice for each server.

In performing our services under this SOW and the applicable WO, we will rely upon any instructions, authorizations, approvals or other information provided to us by your project Manager or by any other personnel identified by your Project Manager.

4.2 Project Assumptions

The Services, fees and delivery schedule for this project are based upon the following assumptions.

- This SOW is considered the baseline scope document outlining Microsoft’s responsibilities for the assistance. Any changes to those responsibilities will be considered a change in scope for the engagement. Any proposed change to the project scope must be put into written format and be submitted to MS during this engagement for review and consideration according to the change management process described above
- This SOW is generated based upon currently known information deemed to be accurate and correct
- All project resources will have the appropriate level of security access required to complete project-related efforts
- You staff will provide all content, graphics, data access, and essential project information in a timely manner
- You will provide all required hardware and software
- Work may be done off-site at the engagement manager and consultants joint discretion, but will be communicated to you ahead of time
- We will work with your staff to obtain temporary workspaces for team members that need to work onsite including: a desk, chair, telephone, and Internet access
- You will schedule the appropriate times to provide access to the network and other critical systems to perform work related to the completion of this project
- Your staff will assist in performing any system configurations required for the architected and approved system(s) to operate and will back systems up appropriately.

Microsoft®

In partnership with

DEMOCRACY LIVE
VOTER INFORMATION TECHNOLOGIES

LiveBallot
Interactive, accessible, voter information.

MOVE Act Solution

Presented to
Virginia State Board of Elections

June 3, 2011





Dear Virginia State Board of Elections:

On behalf of Microsoft and Democracy Live, we would like to personally thank the Commonwealth of Virginia and the Secretary of State's office for the opportunity to present the Microsoft/Democracy Live **LiveBallot™** solution to provide electronic ballots to military and overseas voters.

LiveBallot™ provides state and local jurisdictions with a simple, turn-key electronic balloting solution specifically designed to meet the requirements of both the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) and the Military and Overseas Voter Empowerment (MOVE) Act. **LiveBallot™**, now in its second generation, utilizes Microsoft's state-of-the-art Azure cloud computing technology to deliver to our clients a web-based electronic ballot solution that is secure, cost-effective and easy to deploy. It has been proven in over 250 jurisdictions throughout the U.S.

We have enclosed materials describing in detail the features and benefits of the **LiveBallot™** solution for your review. We would be happy to answer any questions that you may have. If it would be helpful, we can schedule a demonstration of **LiveBallot™** at your convenience.

Sincerely,

H. Kent Smith
Microsoft Services
SLGE Services Executive
kentsmi@microsoft.com

Bryan Finney
President
Democracy Live, Inc.
bryan@democracylive.com

1 ABOUT THE MICROSOFT/DEMOCRACY LIVE TEAM

“LiveBallot provides options to the military that they never had before. It cuts the transit time in half for military voters waiting to get their ballots. It gives them plenty of time to get their ballot and return it in time to be counted.”

- Dolores Gilmore, Election Manager, Kitsap County, WA

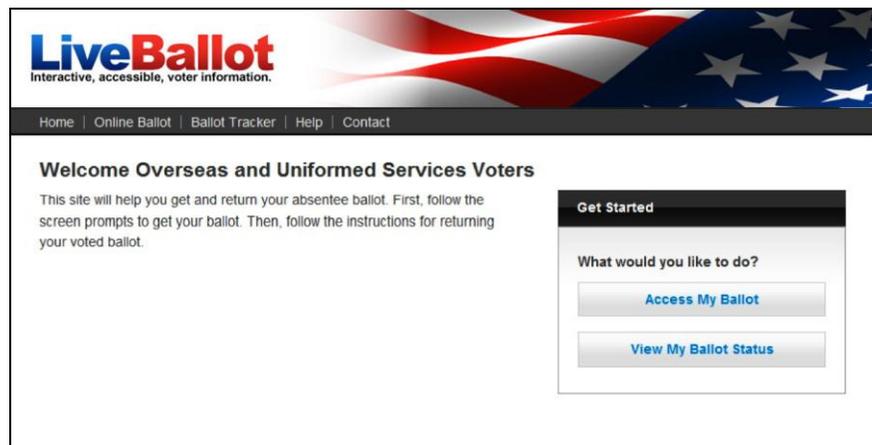
The Microsoft/Democracy Live team consists of professionals who know and understand elections – election technologists, former public officials and legal experts – professionals who know and understand what tools you need to run a successful election. This Team focuses on providing state-of-the-art balloting and voter information technology and solutions to each of the 200 million eligible voters in the U.S.

In response to the needs of overseas, absentee and disabled voters, Democracy Live developed and deployed one of the first electronic ballot delivery systems. Since 2007, the LiveBallot™ platform has been successfully used in hundreds of U.S. jurisdictions to provide domestic, overseas, and disabled voters with a convenient and secure method of casting their ballots.

LiveBallot™ is hosted on Azure, a highly secure, stable cloud environment built to reduce costs and offer unmatched scalability. With over one billion transactions every month, Microsoft Azure is proven to offer 99.9% uptime and reliability.

“The County and Democracy Live are to be congratulated for developing and deploying this modern tool to assist all voters in the County and around the world.”

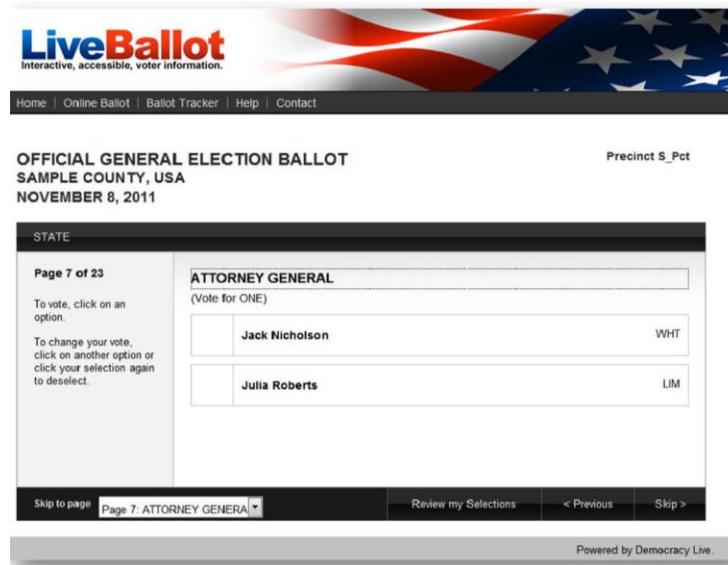
U.S. Congressman Norm Dicks



2 Comprehensive MOVE Act Compliance and Much More

Microsoft and Democracy Live have partnered to bring you an end-to-end solution that offers an all-in-one, accessible, electronic ballot and voter information system. **LiveBallot™** is designed to dynamically grow along with all your future needs. In addition to electronic balloting for overseas and military voters, **LiveBallot™** offers turn-key modules including:

- Secure electronic transmission of the ballot and ballot package
- Automated ballot duplication or direct tabulation of the "home" printed ballot
- Fully accessible, HAVA compliant electronic ballots for disabled voters on any laptop
- Voter-specific accessible electronic sample ballots for all voters in the state



2.1 A Complete MOVE Act Solution

LiveBallot™ has been designed specifically to provide full Move Act compliance. Microsoft and Democracy Live have deployed theLiveBallot™ system in over 250 jurisdictions and delivered ballots to U.S. voters living and serving in over 60 countries around the world.

In a competitive review process, the U.S. Department of Defense and the Federal Voting Assistance Program chose the Microsoft/Democracy Live LiveBallot™

platform as one of a select few systems that was approved for funding under the MOVE Act.

LiveBallot™ is 100% MOVE ACT Compliant and features the following:

- Voter-Specific Online Ballot Look-up
- Printable Ballot and Mailing Instructions
- Ballot Tracking to Confirm Receipt of Ballot
- Voter Registration Confirmation
- Voter-Specific Election and Balloting Information
- State Specific Ballot Return Transmission

MOVE Act Requirements based on NASS Summary 11/6/2009

2.2 Turn-Key Hosted Solution

LiveBallot™ also offers a hosted suite of voter information tools that deliver voter specific balloting information. **LiveBallot™** provides election jurisdictions a turn-key voter information toolbox of electronic balloting applications.

LiveBallot is feature packed to deliver real world solutions	LiveBallot is highly customizable to meet your specific needs
✓ Military Overseas Ballot Delivery	<input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF Allow any overseas and military voter to access and mark their ballot.
✓ Absentee Ballot Delivery	<input type="checkbox"/> ON <input checked="" type="checkbox"/> OFF Allow for disabled voters to access and mark their ballot from home.
✓ eSample Ballot	<input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF Deliver a voter specific sample ballot online.
✓ Voter Guide	<input type="checkbox"/> ON <input checked="" type="checkbox"/> OFF Enable an integrated, accessible voter specific Voter Guide.
✓ Polling Place Look-up	<input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF Allow voters may find their polling place address and map.
✓ Ballot Tracking	<input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF Allow voters may track their absentee ballot.

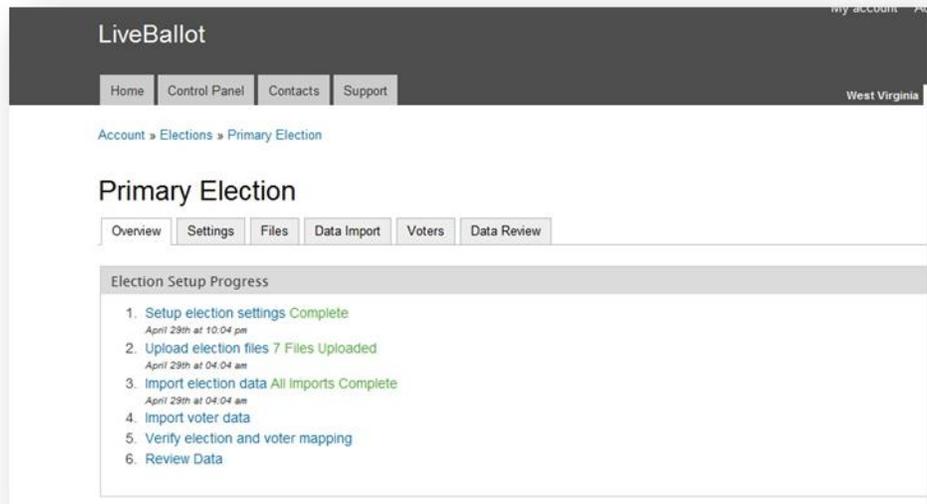
LiveBallot™ has been designed to be ballot and voter registration vendor autonomous. **LiveBallot™** has been deployed in jurisdictions with virtually all the major tabulation vendors. A customized data importer has been created to ensure simple data loading at the state or local level.

Democracy Live team members administer the set-up of the election or management can be accomplished at the State and/or Jurisdiction level.

Key features include:

- As a hosted solution there is no installation or hardware
 - Any typical Web browser can access the **LiveBallot™** system and administrative set-up tools
- Simple set-up
- Imports from election management and/or voter registration systems (file types: .txt, .csv, .xml, .edx)
 - No duplicate election set-up
- Voter-Specific Online Blank Ballot Printing
- Voter-Specific Online Ballot Marking and Ballot Printout
- 24/7 support (during elections)

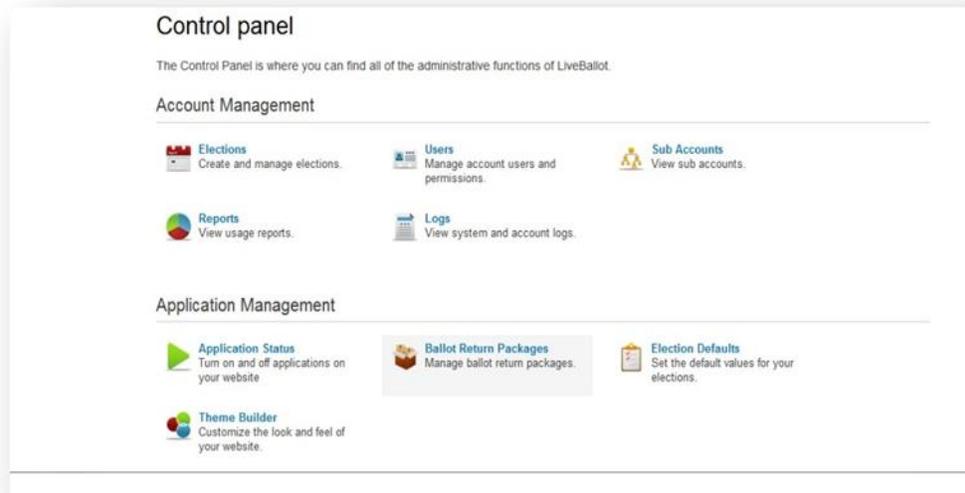
LiveBallot™ Administrative Tools - Election Set-up Overview



2.3 LiveBallot™ is Highly Customizable

The user friendly **LiveBallot™** Administrative Tools also allow for customizing the look and feel of your website, as well as the ballot interface. The **LiveBallot™** Control Panel provides fine grained controls and customization to meet your specific needs.

Administrative Tools Designed by Elections Officials for Elections Officials

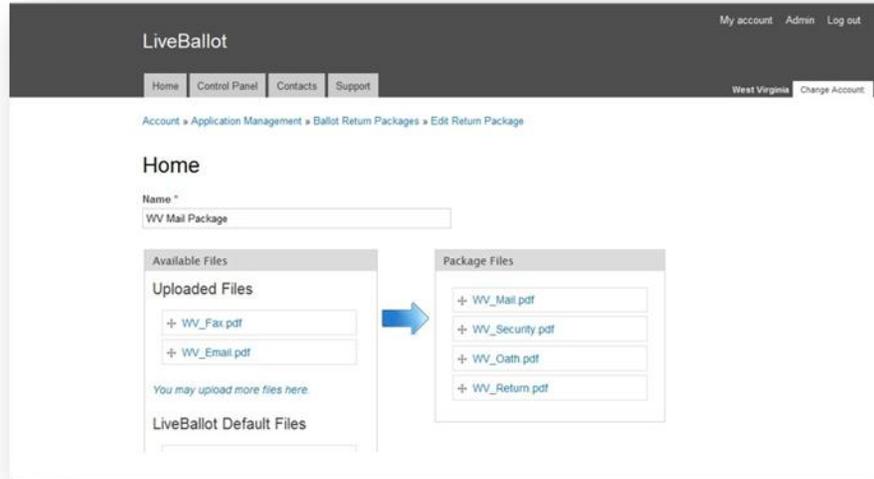


Key Control Panel Functions

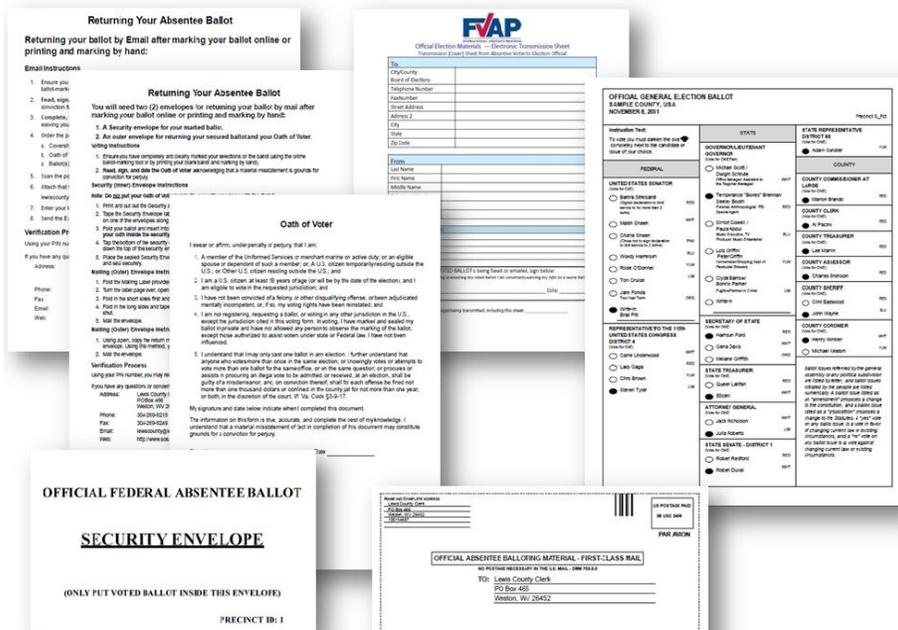
- **Elections**
 - Set-up and import election files
 - Customizable on - screen instructions
- **Reports**
 - Proofing election data
 - Voter Access Reports
 - Voter Ballot Returns
- **Application Status**
 - Turn on/off applications within **LiveBallot™**
- **Theme Builder**
 - Upload Logo
 - Edit banner text
 - Edit website colors
- **Users**
 - Users and Permissions
- **Logs**
 - Election Audit Logs
 - Security Audit Logs
- **Ballot Return Packages**
 - Customizable Ballot Return Packages
 - Upload your own
 - Instructions to voters
 - Envelopes
 - Oath of Voter
 - Coversheets
 - Or use **LiveBallot™** recommended files
- **Sub-Accounts**
 - Allows for statewide elections set-up and county inheritance of statewide data (cutting down on duplicate efforts)
- **Election Defaults**
 - Set election defaults for statewide future elections

Example: Customize Return Ballot Packages

Upload your files or choose to use the **LiveBallot™** Default Files



Example: Custom Ballot Package Forms



Administrative Tools also allow election officials to set-up online ballot setting such as:

- On-screen voting instructions
- Display ballot one contest per screen (DRE style) or as a scrolling screen (paper ballot)
- Voter alerts for No Selections
- Voter alerts on Undervotes (voting less than number of choices)
- Disallowing voter to continue upon Overvote
- Certified Write-In List

Example: Overvoted Contest

The screenshot displays the LiveBallot interface for an official general election ballot in Sample County, USA, dated November 8, 2011. The page is titled "OFFICIAL GENERAL ELECTION BALLOT" and is for "Precinct S_Pct". The current page is "Page 15 of 23" for the "COUNTY CORONER" contest, which requires voting for one person. Two candidates are listed: Henry Winkler (WHT) and Michael Keaton (YLW). Henry Winkler is selected, indicated by a green checkmark. A red error message at the bottom of the contest area states: "You have tried to overvote for this contest. Please unmark your current selection before making another." The navigation bar at the bottom includes "Skip to page" (set to "Page 15: COUNTY CORONER"), "Review my Selections", "< Previous", and "Next >".

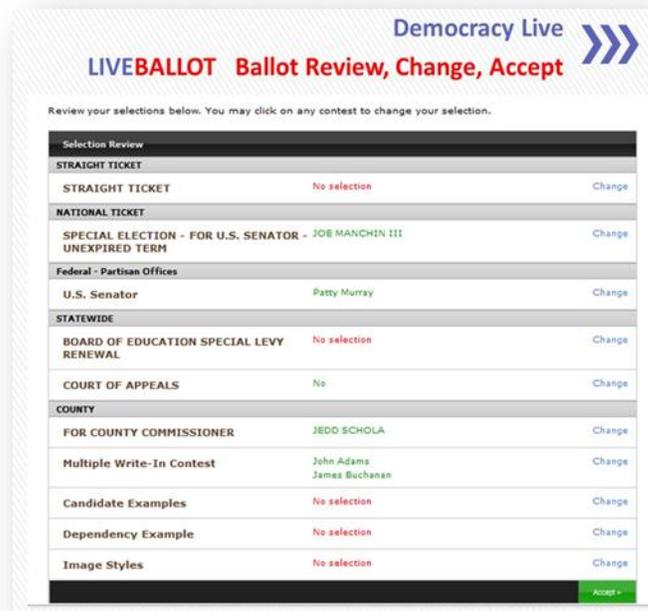
Example: Online Ballot

Voter clicks on their choice to select



Example: Online Ballot Review Screen

Voter can click “change” to return to online ballot and change selections or click “Accept” to accept their choices



3 AUTOMATED BALLOT DUPLICATION

One of the drawbacks for electronically-produced absentee ballots, in most systems, is that they cannot be read by a jurisdiction's tabulation system. Up to now the only solution was to manually duplicate the ballot onto a new, tabulation-compliant ballot. Even at a conservative estimate of 2 to 3 minutes per ballot, this manual duplication process is a costly drain on personnel resources during the busy election season. As a result, many jurisdictions have been reluctant to deploy electronic balloting to the wider voter community.

Not anymore. The Democracy Live's auto-duplication functionality allows election officials to create a machine-readable ballot in one step, saving time and resources for election administrators. By eliminating the time and trouble of manual ballot duplication, Microsoft enables election officials to offer electronic balloting to virtually anyone for whom an electronic ballot is more convenient.

- Integrates with **LiveBallot™** electronic ballot output
- Saves time
- Saves Resources
- REduces costs



4 ACCESSIBLE ABSENTEE BALLOTING SYSTEM

“The Democracy Live LiveBallot system is a marvelous example of a universal design. It provides a valuable resource on voter information for all citizens, including those with disabilities who often lack access to this critical information about candidates and issues.”

- Deborah Cook
Director of the

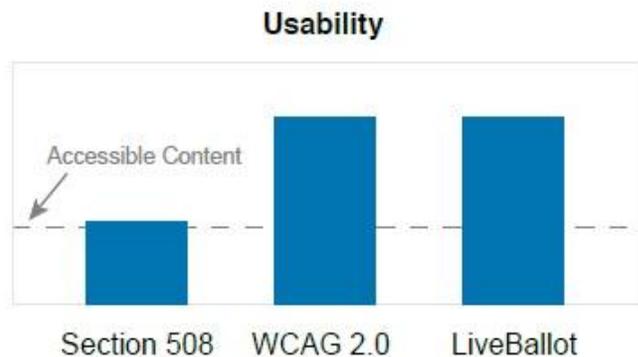
LiveBallot™ may be used domestically to assist voters with disabilities to vote independently from home, or to reduce the cost of elections. **LiveBallot™** could potentially replace expensive voting machines with HAVA Accessibility compliant laptops.

Case Study: Kitsap County, 2010 General Election
Kitsap County, Washington provided LiveBallot as an accessible method of ballot marking and return for the 2010 General Election. A survey of voters with disabilities found:

88% stated LiveBallot made voting easier	50% would not have voted if LiveBallot was not available	97% would continue to use LiveBallot in future elections if available
A practical solution for accessible absentee balloting	Increase voter participation	Increase disability community support of absentee balloting

4.1 Built to Exceed Accessibility Standards

- ✓ Designed with a focus on accessibility exceeding Section 508 compliance by meeting WCAG 2.0
- ✓ Also certified by US Department of Health and Human Services to deliver accessible, Web-based electronic ballots to voters with disabilities
- ✓ Eligible for Section 261 HAVA Accessibility funding



Microsoft Consulting Services Work Order

<i>(For Microsoft Internal Purposes Only)</i> MCS (WO Type 1)- (Public Sector)	Work Order Number: 20110574
	Project Code: 1-14YT927
	Client ID: U8841747
	Client Type: Major
	Vertical Industry: State & Local Government/Education
	Customer Purchase Order Number:

This work order is made pursuant to the Microsoft Master Services Agreement – State & Local (Non-Standard) VA- (VA Contract #100326-MCS) (#U8841747) (the “**agreement**”) effective as of March 26, 2010, by and between Virginia Technologies Agency (“VITA”) and Microsoft Corporation (“Microsoft,” “MCS,” “we,” “us,” or “our”). As an “Affiliate” of VITA, Virginia State Board of Elections is permitted to utilize the agreement and enter into Work Orders with us. Virginia State Board of Elections is referred to as “you” in this Work Order. The terms of the agreement are incorporated herein by this reference. Any terms not otherwise defined herein will assume the meanings set forth in the agreement. This work order is comprised of this cover page and the work order terms below, which are incorporated herein by this

<i>Customer Invoice Information</i>				
Name of Customer	Virginia State Board of Elections	A/P Contact Name (This person receives invoices under this work order.) Matthew Davis		
Street Address	1100 Bank St	Contact	E-mail matthew.davis@sbe.virginia.gov Address	
City	Richmond	State/Province	Phone	(804)-864-8905
	Chester	VA		
Country	USA	Postal Code	Fax	(804) 371-0194
		23219		
<i>Invoicing</i>				
We will invoice you according to our fiscal monthly billing schedule for services performed and expenses incurred during the previous period. Our invoices for payment will be directed to your representative for payment at the address shown above.				
Customer must Select One:				
<input type="checkbox"/> Customer requires Purchase Order for payment of invoice: Please indicate Purchase Order No. here and send actual PO to Microsoft. _____				
<input type="checkbox"/> Customer does not require Purchase Order for payment of invoice. Provide Accounts Payable Name and Phone No.				
<hr/>				
Source to confirm Per Diem limits – hotel, rental car, meals, etc. (if applicable):				
Contact Name:	Contact E-mail address:	Contact phone No.:		
Web site address:				
<i>Period of Performance</i>				
Services under this work order will commence on r around the Effective Date herein. This work order will expire on June 30, 2016 . In order for us to continue work after the expiration date, you and we must agree in writing to a new work order or an amendment to this work order identifying the new expiration date and any other terms upon which you and we agree.				
Payments to Microsoft should be made to the following, include reference to our invoice number: By Check: Microsoft Enterprise Services, P.O. Box 844510, Dallas, TX 75284-4510, or if by overnight delivery, Microsoft Enterprise Services, Lockbox #844510, 1401 Elm Street, Fifth Floor, Dallas, TX 75202				

**By Wire: Microsoft Enterprise Services #844510, Acct 3750825354/ ABA#0260-0959-3, Bank of America, N.A.
 By ACH: Microsoft Enterprise Services, Acct#3750825354/ ABA#11100001-2, Bank of America, N.A.**
 Attachments required with Invoice (Status Reports/Time /Expense Breakouts, Other):

<i>Place of Performance/Project Point of Contact(Customer Satisfaction Contact)</i>		
Name of Customer	Same as above	Project leader (This person is your point of contact for all service-related matters under this work order.)
Street Address		Contact E-mail Address
City	State/Province	Phone
Country	Postal Code	Fax

By signing below the parties acknowledge and agree to be bound to the terms of the agreement and this work order.

<i>Customer</i>	<i>Microsoft Affiliate</i>
Name of Customer (please print) Virginia State Board of Elections	Name Microsoft Corporation
Signature	Signature
Name of person signing (please print)	Name of person signing (please print) David T. Gallagher
Title of person signing (please print)	Title of person signing (please print) Director of Contracts
Signature date	Effective Date

1. Services.

We, will along with partner (Democracy Live) will perform for you, work outlined in the attached Statement of Work (“SOW”) entitled, “Virginia State Board of Elections eBalloting Support” dated June 7, 2011. **This engagement will be performed in accordance with the Microsoft Service Line Offering (SLO) SL1 Enterprise Strategy Projects. Please note, the aforementioned is an internal Microsoft designation for service catalog offering and is provided for Microsoft internal audit purposes only.**

Any dates provided are estimates only. As this is a “Cloud” offering, some of the services will be performed at the place of performance identified on the cover page and other services will be performed at remote facilities. All off-site services will be coordinated with your project leader for the services. Because we are performing the services under your direction, based on an estimated period of performance and fees, we do not warrant that any services deliverables will be completed or be satisfactory to you within the estimated period or fees.

See Attached SOW

2. Fees. (Fiscal Years are tied to the Commonwealth of Virginia’s Fiscal Year Calendar.)

You will pay the following hourly rates and any reasonable out of pocket travel and living expenses (if any) for the individuals assigned. We reserve the right to utilize whichever labor categories in whatever quantities we determine, in our sole discretion, are appropriate to perform the services. Any total fee and labor hours stated are estimates only. The fees do not include fees for products. Unless otherwise specified in the invoice, you will pay us within 30 calendar days of the date of our invoice.

NOTE: Microsoft will charge the VA Board of Elections at its current hourly rates from its FY11 Public Sector Published Pricelist for the first year of the Contract) June 2011 – June 2012). For subsequent years of the contract, Microsoft will charge VA Board of Elections either at its then current Published Sector Published Rates (when determined) or projected rates below (calculated by adding 5% year-over-year), whichever is less.

Billable Costs – Year 1 (FY 12)

Labor Category/Activity	Units	Description	Rate	Proposed Cost
MGSI Consultant	360	Hours	\$73.00	\$26,280
Associate Technician	0	Hours	\$ 103.00	\$0
Technician	0	Hours	\$ 129.00	\$0
Technician I	0	Hours	\$ 155.00	\$0
Technician II	0	Hours	\$ 180.00	\$0
Technician III	0	Hours	\$ 206.00	\$0
Technician IV	0	Hours	\$ 232.00	\$0
Technician V	1250	Hours	\$ 250.00	\$312,500
MCS Associate Consultant	0	Hours	\$ 214.00	\$0
MCS Consultant	0	Hours	\$ 234.00	\$0
MCS Senior Consultant	120	Hours	\$ 256.00	\$30,720
MCS Project Manager	0	Hours	\$ 256.00	\$0
MCS Engagement Manager	60	Hours	\$ 256.00	\$15,360
MCS Practice Manager	0	Hours	\$ 271.00	\$0
MCS General Manager	0	Hours	\$ 271.00	\$0
MCS Principal Consultant	0	Hours	\$ 271.00	\$0
MCS Architectural Consultant	0	Hours	\$ 286.00	\$0
	0	TOTAL HOURS		\$384,860
Proposed Travel Cost				\$0
Estimated Total				\$384,860.00

Billable Costs – Year 2 (FY 13)

Labor Category/Activity	Units	Description	Rate	Proposed Cost
MGSI Consultant	40	Hours	\$73.00	\$2,920
Associate Technician	0	Hours	\$ 108.00	\$0
Technician	0	Hours	\$ 135.00	\$0
Technician I	0	Hours	\$ 163.00	\$0
Technician II	0	Hours	\$ 189.00	\$0
Technician III	0	Hours	\$ 216.00	\$0
Technician IV	0	Hours	\$ 244.00	\$0
Technician V	238	Hours	\$ 263.00	\$62,594
MCS Associate Consultant	0	Hours	\$ 205.00	\$0
MCS Consultant	0	Hours	\$ 234.00	\$0
MCS Senior Consultant	60	Hours	\$ 259.00	\$15,540
MCS Project Manager	0	Hours	\$ 259.00	\$0
MCS Engagement Manager	24	Hours	\$ 259.00	\$6,216
MCS Practice Manager	0	Hours	\$ 274.00	\$0
MCS General Manager	0	Hours	\$ 288.00	\$0
MCS Principal Consultant	0	Hours	\$ 274.00	\$0
MCS Architectural Consultant	0	Hours	\$ 288.00	\$0
	0	TOTAL HOURS		\$87,270
Proposed Travel Cost				\$0
Estimated Total				\$87,270.00

Billable Costs – Year 3 (FY 14)

Labor Category/Activity	Units	Description	Rate	Proposed Cost
MGSI Consultant	40	Hours	\$77.00	\$3,080
Associate Technician	0	Hours	\$ 114.00	\$0
Technician	0	Hours	\$ 142.00	\$0
Technician I	0	Hours	\$ 171.00	\$0
Technician II	0	Hours	\$ 198.00	\$0
Technician III	0	Hours	\$ 227.00	\$0
Technician IV	0	Hours	\$ 256.00	\$0
Technician V	227	Hours	\$ 276.00	\$62,652
MCS Associate Consultant	0	Hours	\$ 215.00	\$0
MCS Consultant	0	Hours	\$ 246.00	\$0
MCS Senior Consultant	60	Hours	\$ 272.00	\$16,320
MCS Project Manager	0	Hours	\$ 272.00	\$0
MCS Engagement Manager	24	Hours	\$ 272.00	\$6,528
MCS Practice Manager	0	Hours	\$ 288.00	\$0
MCS General Manager	0	Hours	\$ 302.00	\$0
MCS Principal Consultant	0	Hours	\$ 288.00	\$0
MCS Architectural Consultant	0	Hours	\$ 302.00	\$0
	0	TOTAL HOURS		\$88,580
Proposed Travel Cost				\$0
Estimated Total				\$88,580.00

Billable Costs – Year 4 (FY 15)

Labor Category/Activity	Units	Description	Rate	Proposed Cost
MGSI Consultant	40	Hours	\$81.00	\$3,240
Associate Technician	0	Hours	\$ 119.00	\$0
Technician	0	Hours	\$ 149.00	\$0
Technician I	0	Hours	\$ 179.00	\$0
Technician II	0	Hours	\$ 208.00	\$0
Technician III	0	Hours	\$ 238.00	\$0
Technician IV	0	Hours	\$ 269.00	\$0
Technician V	216	Hours	\$ 290.00	\$62,640
MCS Associate Consultant	0	Hours	\$ 226.00	\$0
MCS Consultant	0	Hours	\$ 258.00	\$0
MCS Senior Consultant	60	Hours	\$ 286.00	\$17,160
MCS Project Manager	0	Hours	\$ 286.00	\$0
MCS Engagement Manager	24	Hours	\$ 286.00	\$6,864
MCS Practice Manager	0	Hours	\$ 302.00	\$0
MCS General Manager	0	Hours	\$ 318.00	\$0
MCS Principal Consultant	0	Hours	\$ 302.00	\$0
MCS Architectural Consultant	0	Hours	\$ 318.00	\$0
	0	TOTAL HOURS		\$89,904
Proposed Travel Cost				\$0
Estimated Total				\$89,904.00

Billable Costs – Year 5 (FY 16)

Labor Category/Activity	Units	Description	Rate	Proposed Cost
MGSI Consultant	40	Hours	\$85.00	\$3,400
Associate Technician	0	Hours	\$ 125.00	\$0
Technician	0	Hours	\$ 157.00	\$0
Technician I	0	Hours	\$ 188.00	\$0
Technician II	0	Hours	\$ 219.00	\$0
Technician III	0	Hours	\$ 250.00	\$0
Technician IV	0	Hours	\$ 282.00	\$0
Technician V	205	Hours	\$ 305.00	\$62,525
MCS Associate Consultant	0	Hours	\$ 237.00	\$0
MCS Consultant	0	Hours	\$ 271.00	\$0
MCS Senior Consultant	60	Hours	\$ 300.00	\$18,000
MCS Project Manager	0	Hours	\$ 300.00	\$0
MCS Engagement Manager	24	Hours	\$ 300.00	\$7,200
MCS Practice Manager	0	Hours	\$ 317.00	\$0
MCS General Manager	0	Hours	\$ 333.00	\$0
MCS Principal Consultant	0	Hours	\$ 317.00	\$0
MCS Architectural Consultant	0	Hours	\$ 333.00	\$0
	0	TOTAL HOURS		\$91,125
Proposed Travel Cost				\$0
Estimated Total				\$91,125.00

Total Estimated Billable Costs (FY 12 – FY 16)

Year	Total Billable Cost
Year 1 (FY '12)	\$ 384,860
Year 2 (FY '13)	\$ 87,270
Year 3 (FY '14)	\$ 88,580
Year 4 (FY '15)	\$ 89,904
Year 5 (FY '16)	\$ 91,125
Total	\$ 741,739

3. **Your responsibilities.** In addition to your responsibilities described in Section 1, “Services”, above, you will, at your expense, provide us the following:

- a. access to all necessary on-site facilities, including office space, telephones, analogue modems or PPTP, computer equipment, internet access, and test and monitoring equipment;
- b. access to and copies of relevant technical information;
- c. access to and sufficient time with your technical, management, and other personnel as necessary for us to perform the services; and
- d. a project leader as your primary point of contact with us and to provide technical direction to our personnel performing the services.

4. **Ownership and license.**

- a. **Products and fixes.** All products and fixes provided pursuant to this work order shall be licensed according to the terms of the license agreement packaged with or otherwise applicable to such product. You are responsible for paying any licensing fees associated with products. “**Product**” means any computer code, web-based services, product-related solutions or materials comprising commercially released, pre-release or beta products (whether licensed for a fee or no charge) and any derivatives of the foregoing we make available to you for license which is published by us, our affiliates, or a third party. “**Fixes**” means product fixes that we either release generally (such as commercial product service packs) or that we provide to you when performing services (such as workarounds, patches, bug fixes, beta fixes and beta builds) and any derivatives of the foregoing.
- b. **Pre-existing work.** All rights in any computer code or materials (other than products or fixes) developed or otherwise obtained independently of the efforts of a party under this work order (“**pre-existing work**”) shall remain the sole property of the party providing that pre-existing work. During the performance of the services for this work order, each party grants to the other party (and our contractors as necessary) a temporary, non-exclusive license to use, reproduce and modify any of its pre-existing work provided to the other party solely for the performance of such services. Upon payment in full, we grant you a non-exclusive, perpetual, fully paid-up license to use, reproduce and modify (if applicable) our pre-existing work in the form delivered to you as part of the service deliverables for your internal business operations. “**Service deliverables**” means any computer code or materials (other than products or fixes) that we leave with you at the conclusion of our performance of service(s). Your licenses to our pre-existing work is conditioned upon your compliance with the terms of the agreement and this work order and the perpetual license applies solely to our pre-existing work that we leave to you at the conclusion of our performance of the services.
- c. **Developments.** Upon payment in full, we assign you joint ownership in all rights in any computer code or materials (other than products, fixes or pre-existing work) developed by us (or in collaboration with you) and provided to you in the course of performance of this work order (“**developments**”). “**Joint ownership**” means each party has the right to independently exercise any and all rights of ownership now known or hereafter created or recognized, including without limitation the rights to use, reproduce, modify and distribute the developments for any purpose whatsoever, without the need for further authorization to

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d. Affiliates rights. You may sublicense the rights to the service deliverables granted hereunder to your affiliates, but your affiliates may not further sublicense these rights. Any sublicensing of the service deliverables to your affiliates as permitted by this Section 4 must be consistent with the license terms in the agreement and this work order. If “**affiliate**” is not defined in the agreement, it means (i) if you are a commercial entity, legal entities that you own, which own you, or which are under common ownership with you; and (ii) if you are a state or local government agency, any government agency, department, instrumentality, division, unit or other office of your state or local government that is supervised by or is part of you, or which supervises you or of which you are a part, or which is under common supervision with you; together with, as mandated by law, any county, borough, commonwealth, city, municipality, town, township, special purpose district, or other similar type of governmental instrumentality located within your state’s jurisdiction and geographic boundaries; provided that a state and its affiliates will not, for purposes of this definition, be considered to be affiliates of the federal government and its affiliates. “**Ownership**” means more than 50% ownership.

e. Open source license restrictions. Because certain third party license terms require that computer code be generally (i) disclosed in source code form to third parties; (ii) licensed to third parties for the purpose of making derivative works; or (iii) redistributable to third parties at no charge (collectively, “excluded license terms”), the license rights that each party has granted to any computer code (or any intellectual property associated therewith) do not include any license, right, power or authority to incorporate, modify, combine and/or distribute that computer code with any other computer code in a manner which would subject the other’s computer code to excluded license terms.

Furthermore, each party warrants that it will not provide or give to the other party computer code that is governed by excluded license terms.

f. Reservation of rights. All rights not expressly granted in this Section 4 are reserved.

5. Cost or Pricing Data. We will not, under any circumstances, accept work that would require the submission of cost or pricing data.

eBalloting-Portal Integration and
Implementation Support
for
Virginia State Board of Elections



★VIRGINIA★
STATE BOARD
of ELECTIONS



Statement of Work
Prepared by:

Microsoft

DEMOCRACY LIVE
VOTER INFORMATION TECHNOLOGIES

 **OSDV**
OPEN SOURCE DIGITAL VOTING FOUNDATION

21 June 2011

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1. OVERVIEW

1.1 Background

Microsoft Services will work with Democracy Live and the Open Source Digital Voting (OSDV) Foundation to develop, integrate, and deploy a comprehensive set of Uniformed and Overseas Citizens Absentee voting Act (OCAVA) voter services for the State Board of Elections (SBE) of the Commonwealth of Virginia. This solution will integrate Democracy Live **LiveBallot™** (Software as a Service) solution built on the Microsoft SQL Azure Platform.

1.2 Goals of the Engagement

The purpose of this engagement will be to deliver two (2) solutions that are part of a comprehensive set of UOCAVA voter services. Specific objectives for this engagement are as follows:

- Develop and deliver a Voter Portal solution for VA SBE that integrates the existing OSDV portal with the Microsoft-Democracy Live **LiveBallot™** solution
- Develop and deliver a Voter Services and Balloting Analytics solution for VA SBE
- Collaborate on data format and data feed mechanics for interchange between the OSDV Analytics solution and Democracy Live **LiveBallot™** solution
- Collaborate with VA SBE on data format and data feed mechanics for interchange between OSDV Analytics solution and existing VA SBE systems
- Collaborate with VA SBE on data format and data feed mechanics for interchange between the OSDV Portal solution and existing VA SBE systems
- Collaborate with OSDV and Democracy Live staff on integrations between the **LiveBallot™** hosted solutions and the OSDV Analytics solution
- Collaborate with VA SBE and Democracy Live on integration testing, release engineering, final user acceptance testing of the fully integrated OSDV Analytics solution and **LiveBallot™** system
- Develop and deliver documentation and reporting deliverables required by VA SBE
- Establish a continuing data collection system to provide reference data over time, detailing voter usage of all UOCAVA voter services, with data available in a common data format that will enable FVAP and others to analyze data over data and compared between VA and other election jurisdictions.

1.3 Proposed Solution Overview

The Microsoft-Democracy Live-OSDV team will extend existing technologies for on-line identification of VA voters, for classification of voters under VA election law, for voter registration assistance, and for logging of voter usage of online voter services and voter registration record information. The result will consist of two distinct solutions:

- A VA Voter Portal that assists voters with status, eligibility, registration, absentee request, and eligibility to use the Democracy Live balloting solution;

- A VA Voter Services and Balloting Analytics that aggregates usage log information from the Portal, existing VA SBE systems, and the Democracy Live solution, creating consolidated data in a common data format.

Microsoft will work with VA SBE, OSDV and Democracy Live to identify existing standards-based data formats, and to create data interoperability between the systems. OSDV will also work with Democracy Live on transaction integration, in which a Portal user, when determined to be eligible for remote balloting, is directed to the Democracy Live **LiveBallot™** solution in an integrated manner.

LiveBallot™ provides state and local jurisdictions with a simple, turn-key electronic balloting solution specifically designed to meet the requirements of both the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) and the Military and Overseas Voter Empowerment (MOVE) Act. **LiveBallot™**, now in its second generation, utilizes Microsoft's state-of-the-art Azure cloud computing technology to deliver to our clients a web-based electronic ballot solution that is secure, cost-effective and easy to deploy. It has been proven in over 250 jurisdictions throughout the U.S.

The resulting total solution will provide UOCAVA voter services for VA SBE, from registration through ballot tracking, and will provide complete usage data and reporting of each voter service, including those already provided by VA SBE as well as those provided in this project.

1.3.1 Portal Solution

The Virginia Voter Services Portal is a Web application that will be used by UOCAVA voters to manage their responsibilities for maintaining the ability to vote overseas. Users initially access the system to identify themselves using information that is already in VA voter records - if the user is a registered voter. For those not registered to vote, the Portal provides assistance in determining eligibility to vote, collection of voter registration information, and providing a completed and correct voter registration form for the user to print, with full support for VA-specific requirements for forms use. For users who access the Portal using a set of current voter registration data, the Portal provides similar assistance in updating registration information, eligibility to vote absentee, UOCAVA status, and request for absentee ballot. Finally, the Portal also assists voters in determining eligibility to use the remote balloting **LiveBallot™** solution; for eligible users, the Portal directs the user to the appropriate **LiveBallot™** web page for beginning the remote balloting process.

The key features of project work on the Portal are:

- Use of existing OSDV VA UOCAVA solution for voter identification
- Use of existing support for import of VA voter records, extended to support the use of EML-based common data formats recommended by IEEE 1622 standards body
- Use of existing voter registration forms wizard capability, extended to support the complete list of VA-required forms and form usage for registration, re-registration, and absentee request
- Implementation of VA-specific logic for eligibility voting, absentee voting, and use of balloting solution
- Extension of transaction logging capabilities to support Portal transaction log export using EML-based common data formats recommended by IEEE 1622 standards body

- Integration with existing VA voter record systems, to obtain voter records; to obtain ballot information; to provide voter request information; and to provide transaction log information
- Integration with Democracy Live to transition UOCAVA user sessions for continue with ballot processing and other features of the Democracy Live solution.

1.3.2 Analytics Solution

The Voter Services and Balloting Analytics service is a Web application that will be used by VA SBE staff to aggregate information about voter activity from diverse sources:

- The Virginia Voter Services Portal: voter registration requests, updates, absentee and UOCAVA status lookups, absentee ballot requests
- Democracy Live LiveBallot™ solution: balloting, ballot tracking, and other transactions supported by Democracy Live
- Existing VA voter records: UOCAVA voter status at end of an election cycle: ballot received and counted, ballot received but not counted, ballot not received.

The Analytics service aggregates these disparate record streams, and constructs a unified set of voter-specific records that both lists every voter action in a standard form, and also lists each voter's actions for the entire election cycle. The Analytics service supports common data formats (CDFs) in two ways: provides features to SBE staff to import data using CDFs; provides a feature to export the consolidated dataset, using CDFs. In addition, the Analytics service also provides basic statistics reporting. However, the main innovative feature of the Analytics service is the export functionality. Using CDFs, other parties, including FVAP, can obtain a complete set of VA-wide data, to compare or combine with data from other states, and to perform statistics and data mining beyond the statistics of the Analytics service's Web interface.

By supporting CDFs, the open-data and complete-data nature of the Analytics service will make the Analytics service equally useful to other elections organizations that require standards-based voter activity data aggregation.

2. PROJECT SCOPE

2.1 Areas within Scope

2.1.1 Envisioning Phase

The Envisioning phase will be used to identify discrete roles, responsibilities, team members and interface points across business, technology and managed services. At the start of the project, a kick-off meeting will be held to confirm our understanding of the deliverables, agree on a plan of activities and schedule key meetings including formal reviews. We will use this meeting to verify the appropriate resources are allocated, meetings are scheduled, expectations are set, the core project teams are introduced, and project control mechanisms are implemented.

During this phase we will perform the following activities:

- Describe the current business environment and requirements for this engagement
- Describe current Portal and Analytics solution architectures
- Assess Current Environment and collect solution requirements
- Develop detailed list of technical and functional requirements
- Document (or validate existing) Business and Technical Requirements for:
 - A VA Voter Services Portal solution
 - A VA Voter Services and Balloting Analytics service.

2.1.2 Planning Phase

The Planning Phase will involve the development of a solution and a detailed project plan for the remainder of the project. We will perform the following activities during this phase:

- Analyze VA SBE business and technical requirements to ensure they are addressed in the integrated OSDV solution set and Democracy Live *LiveBallot*™ solution
- Define data format and data feed mechanics for interchange between the OSDV Analytics solution and Democracy Live *LiveBallot*™ solution
- Define data format and data feed mechanics for interchange between OSDV Analytics solution and existing VA SBE systems
- Define data format and data feed mechanics for interchange between the OSDV Portal solution and existing VA SBE systems
- Define integrations between the *LiveBallot*™ hosted solutions and the OSDV Analytics solution
- Develop a continuing data collection design/process to provide reference data over time detailing voter usage of all UOCAVA voter services, with data available in a common data format that will enable FVAP and others to analyze data over data and compared between VA and other election jurisdictions
- Develop a Functional Specification document.

2.1.3 Development Phase

The Development phase begins with the first iteration of development and culminates with the “functionality complete” milestone (or Beta release). During this phase, we will build and demonstrate the solution in your test laboratory environment. This phase will include the following activities:

- Setup the OSDV portal solution integrated with the **LiveBallot™** in your lab environment
- Setup the OSDV Voter Services and Balloting Analytics service in your lab environment
- Develop and execute test procedures to ensure business and technical requirements are satisfied against the integrated Portal and Analytics service solution set
- Demonstrate the integrated OSDV Portal and Analytics solution set integrated with the **LiveBallot™** solution to VA SBE personnel
- Demonstrate the OSDV Portal and Analytics solution set inter-operating with VA SBE systems.

2.1.4 Stabilization Phase

During The Stabilization phase, we will perform the following activities:

- We will conduct a test pilot for up to fifty (50) users in the production environment using the **LiveBallot™** tool integrated with the OSDV portal
- We will conduct acceptance testing procedures to ensure that the requirements identified in the Envisioning Phase are satisfied
- Perform remediation configuration activities on the **LiveBallot™** tool and OSDV portal integrations to address any issues/problems uncovered during the pilot test exercise
- We will develop a Test Report that documents Acceptance Test procedures and resulting using the pilot test users.

2.1.5 Deployment Phase

During this phase, we will perform the following activities:

- Execute operational test procedures from multiple remote locations to ensure the **LiveBallot™** and OSDV integrated portal is functioning properly
- Execute operational test procedures to ensure the OSDV Voter Services and Balloting Analytics is functioning properly
- Deploy the OSDV Portal and Analytics solution set integrated with the **LiveBallot™** solution in a Microsoft hosted environment
- Provide customer access to the solution set to allow execution of administrative procedures and to run reports
- Provide operational support during one (1) an election to ensure the eBalloting-OSDV portal integrated solution is made available and is functions as designed for Commonwealth of Virginia constituents.

2.1.6 Software Environments

The following environment will be needed for this project during both the development and production deployment aspects of this project:

- Cloud hosted ruby/rails application environments for test deployment of standalone Portal and Analytics systems – to be established by OSDV within 4 weeks of project inception
- Microsoft hosted production environment – to be established within 8 weeks of project inception.

2.1.7 Training and Knowledge Transfer

Informal knowledge transfer will be provided throughout the project. Informal knowledge transfer is defined as informal activities provided when Virginia State Board of Elections team members, associates, or contractors in concert with Microsoft team members. This may include: whiteboard discussions, email threads, Live Meeting conference calls and facilitated meetings on technical topics. No deliverables or meeting summary will be provided for these sessions or activities. There will no formal classroom training provided.

2.1.8 Areas Out of Scope

- We will not purchase (or provide) any hardware or software for this project
- Anything not excluded in this section and not listed in the above “Areas within Scope” is considered out of scope for this SOW.

3. PROJECT APPROACH, TIMELINE, AND SERVICE DELIVERABLES

3.1 Microsoft Solutions Framework

Microsoft Services leverages the Microsoft Solutions Framework (MSF), which is a five-phase project approach that has been executed across multiple customer engagements of various project types and sizes. Microsoft recommends this phased approach for projects and has seen customers to be highly successful with their deployments when they follow a similar phased approach. Microsoft will perform task activities in each of the five (5) MSF phases. The five phases are described below.

- **Envisioning:** Envisioning is about creating a technical vision via high level requirements and constraints and defining the projects work plan and work scope necessary to bring the technical vision to reality.
- **Planning:** Planning follows envisioning and ends in a milestone that has resulted in functional requirements and specifications that outline the system Architecture and Design.
- **Build/Development:** The Development phase begins with the first iteration of lab build out and culminates with the functionality complete milestone. All system functionality is validated in the lab environment and updates to the functional specification are made as required.
- **Stabilization:** The Stabilization phase system testing including user and performance testing. Each test must be accepted as per the metrics and constraints identified in planning phase. The stabilization phase culminates in a pilot.
- **Deployment:** The Deployment phase includes final release management, and the remaining end user client deployment. For this effort this is an end user communication and coordination issue. The deployment phase also includes the migration of data from the source systems to the target systems.

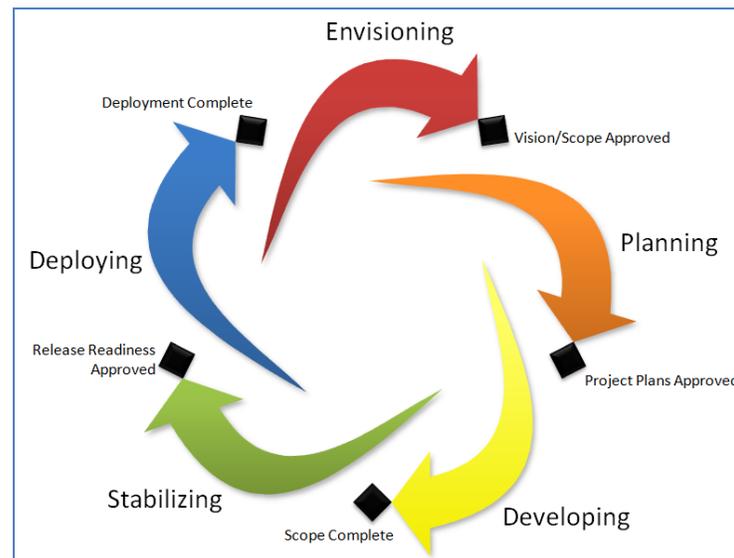


Figure 1: MSF Process Model Phases and Milestones

3.2 Approach

Our approach is summarized in the following subsections and identifies Microsoft team activities that will be conducted as well as VA SBE associated task activities. **Note: Prior to the start of the Envisioning Phase – Microsoft recommends that there be a pre-engagement call. During the call, we will review the approach for the engagement and VA SBE business owners that need to participate in the engagement.**

3.2.1 Key Microsoft Activities

Key Activities for Microsoft during the project will include the following:

- Kick-off and Vision and Scope meeting
- Define roles and responsibilities for you and Microsoft
- Key contacts for both Customer and Microsoft
- Outline roles and responsibilities
- Outline key information needed to complete the project
- Identify lead person for Virginia Board of Elections
- Identify other dependencies that will or could affect or impact the engagement, such as availability of resources and personnel
- Confirm project approach
- Build and confirm project plan. This is a shortened high-level project plan for the engagement that outlines the tasks to be completed
- Execute the task activities described in Section 1 associated with the delivery using the MSF process
- Provide on-going status information to the customer and to the Microsoft team via Weekly Project Status Reports - during Envisioning and Planning activities only.

3.2.2 Key Customer Activities

Key Activities for the Customer during this project will include the following:

- Function as lead in collecting information needed in the Envisioning and Planning Phases
- Provide environment information
- Provide the right personnel to assist with project activities
- Ensure availability of personnel (both Microsoft and Customer) and testing facilities
- Provide facilities for Microsoft personnel to work during the length of the project
- Provide an executive sponsor.

3.3 Estimated Timeline

The estimated timeline for this project is shown in the table below:

Phase	Estimated Duration
Envisioning	Approximately 4 Weeks
Planning	Approximately 2 Weeks
Development	Approximately 6 Weeks
Stabilization	Approximately 3 Weeks
Deployment	Approximately 4 Weeks
Total	Approximately 19 Weeks

Table 1: Estimated Project Timeline

3.4 Key Service Deliverables and Acceptance Process

3.4.1 Key Project Service Deliverables

The following is a list of the key project Service Deliverables that will be produced within the scope of this SOW. They must be reviewed and accepted under the process described later in this proposal.

Project Phase	Service Deliverable Name	Service Deliverable Description
Envisioning Phase	Vision Scope Document	<p>Describes the solution concept, the architectural and technical designs used to create the solution and the way the team and project will be organized</p> <p>This document will include:</p> <ul style="list-style-type: none"> - Background - Problem Statement - Opportunity Statement - Project Vision and Scope - Vision Statement - Requirements (Business, User, Operational, System and Capacity) - Project Phases and Objectives - Solution Design Strategies - Site Analysis Results - Initial Risk Assessment - Team model and roles
	Project Plan	Provides a Gantt chart showing task activities, key milestones, resources needed and critical paths.
Planning Phase	Functional Specification Document	Architecture and Design document that details the architecture of the integrated OSDV and Democracy Live LiveBallot™ solution.

Project Phase	Service Deliverable Name	Service Deliverable Description
Stabilization Phase	Test Report	Documents Test Plan procedures used, test executed, test results and remediation recommendations.
All Tasks	Weekly Status Report (To be provided during migration of users only)	Provides summary of tasks completed, tasks planned, hours worked , risks and suggested risk mitigation strategies

Table 2: Key Project Service Deliverables

3.4.2 Service Deliverable Acceptance Process

At specified milestones throughout the project, we will submit completed project Service Deliverables for your review and approval. Within five (5) business days from the date of submittal, you must either:

- (i) Accept the Service Deliverable by signing, dating, and returning the Service Deliverable Acceptance Form (see Exhibit section), or
- (ii) Provide a written notice rejecting the Service Deliverable, including a single and complete list describing every reason for your rejection.

Service Deliverables shall be deemed accepted unless you provide a written rejection notice as described above. Your use or partial use of a Service Deliverable will constitute acceptance of that Service Deliverable.

Microsoft will correct problems with a Service Deliverable that are identified in the written rejection notice, as described above, and within the scope of the Service Deliverable, after which the Service Deliverable will be deemed accepted. Problems that are outside the scope of a Service Deliverable, and feedback provided after a Service Deliverable has been deemed accepted will be addressed as a potential change of scope pursuant to the Change Management process outlined in this SOW.

3.5 Project Governance Approach

3.5.1 Communication Plan

The following will be used to provide formal communication during the course of the project:

- Working in conjunction with the Consultant and Customer Project Manager, the Engagement Manager will compile weekly status reports for distribution.
- Weekly engagement status meetings will be held to review the engagement overall status, the acceptance of deliverables, the project schedule, risks, assumptions review and open issues noted in the status report.

3.5.2 Issue/Risk Management Procedure

The following general procedure will be used to manage active project issues and risks. Active issues and risks will be monitored and reassessed on a weekly basis. Mutually agreed upon issue escalation and risk management processes will be defined at the outset of the project.

- **Identify:** Identify and document project issues (current problems) and risks (potential events that impact the project)
- **Analyze and Prioritize:** Assess the impact and determine the highest priority risks and issues that will be managed actively
- **Plan and Schedule:** Decide how high-priority risks are to be managed and assign responsibility for risk management and issue resolution
- **Track and Report:** Monitor and report the status of risks and issues and communicate issue resolutions
- **Control:** Review the effectiveness of the risk and issue management actions.

3.5.3 Change Management Process

During the project either party may request in writing additions, deletions, or modifications to the services described in this SOW (“change”). We shall have no obligation to commence work in connection with any change until the estimated fee and schedule impact of the change is agreed upon in a written Change Request Form signed by the designated Project Managers from both parties.

Upon a request for a change, we shall submit the change on our standard change Request Form describing the change, including the estimated impact of the change on the project schedule, fees and expenses. The Change Management Process that will be employed is defined below. Both parties agree to follow this process and to use the Change Request Form:

- Identify and document
- Assess impact and prioritize
- Estimate required effort
- Approve / disapprove
- Assign responsibility
- Monitor and report progress
- Communicate change resolution.

Within five (5) consecutive business days of receipt of the proposed Change Request Form, you shall either indicate acceptance of the proposed change by signing the Change Request Form or advise us not to perform the change. If you advise us not to perform the change, then we shall proceed only with the original services. In the absence of your acceptance or rejection, we will not perform the proposed change.

3.5.4 Escalation Process

The Microsoft Lead will work closely with your Project Manager, Sponsor, and other designees to manage Project issues, risks, and Change Requests, as described in Sections 3.5.2 and 3.5.3 above. The standard escalation process for review and approval and/or dispute resolution is as follows:

Escalation Path

- Project Team member (Microsoft or Customer)
- Project Manager (Customer)
- Microsoft Engagement Manager / Project Sponsor
- Microsoft Executive Leadership Team.

3.6 Project Completion

The project will be considered complete when any of the following conditions is met:

1. All of the service deliverables identified within this SOW and any Change Requests accepted herein have been completed, delivered and accepted or deemed accepted; or
2. The fee provisions of the Work Order have been met; or
3. This SOW is terminated pursuant to the provisions of the agreement.

4. PROJECT ORGANIZATION AND STAFFING

4.1 Project Organization Structure

Our proposed Delivery Team and organization is graphically depicted in the diagram below. We will maintain a simple structure that eliminates overhead cost and provides an effective means for technical and contractual performance against the requirements.

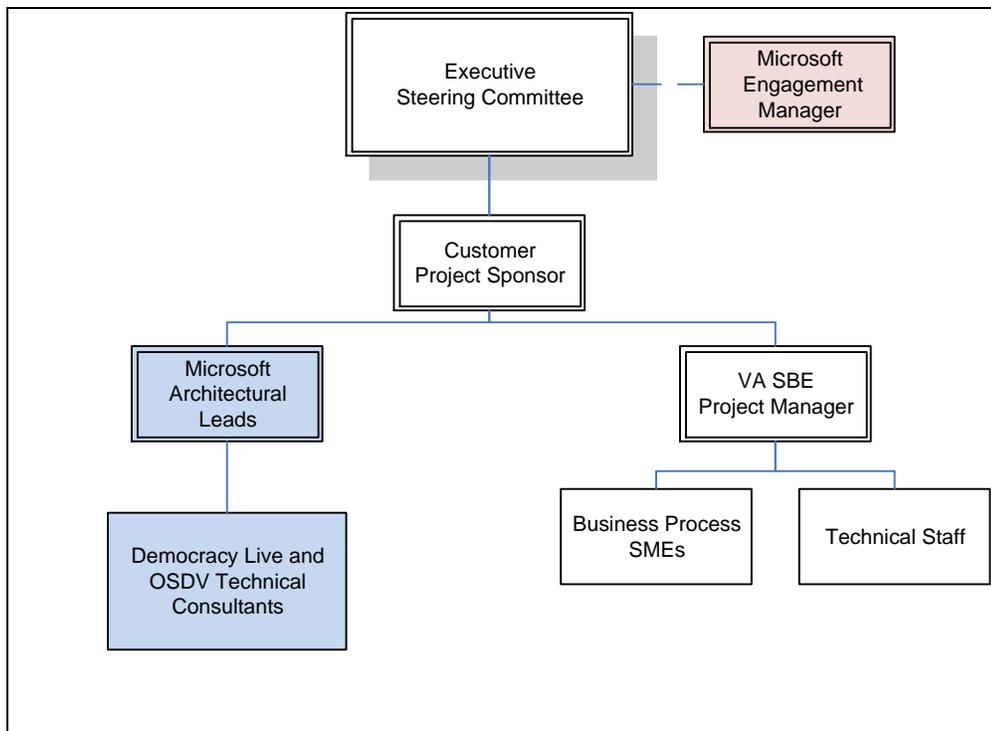


Figure 2: Project Program Management Organization

4.2 VA SBE Roles and Responsibilities

Role	Responsibilities	Project Commitment
Project Sponsor	<ul style="list-style-type: none"> Makes key project decisions and clears project roadblocks 	Part time role
VA SBE Project Manager	<ul style="list-style-type: none"> Primary point of contact for Microsoft team Responsible for managing, owning, and coordinating the overall project and schedule Responsible for resource allocation, risk management, project priorities, and communication to executive management Manages day-to-day activities of the project Coordinates the activities of the team to deliver deliverables according to the project schedule 	Full time role
SMEs	<ul style="list-style-type: none"> Responsible for participating / providing input into the Exchange 2010 design process Primary functional point of contact for the team Primary technical point of contact for the team that is responsible for technical architecture and code deliverables 	Part time role, as requested

Table 3: VA SBE Roles and Responsibilities

4.3 Microsoft Team Project Roles and Responsibilities

This section provides a brief overview of key project role responsibilities.

Role	Responsibilities	Project Commitment
Engagement Manager	<ul style="list-style-type: none"> Responsible for deliverable quality and your overall satisfaction with our services Single point of contact for billing issues, personnel matters, contract extensions and project status 	Part time role
MCS and Partner (Democracy Live and OSDV) Consultant(s)	<ul style="list-style-type: none"> Defines the platform architecture Resolves high-level technical & functional issues Provides input to the project schedule Single point of contact to MCS EM, MCS 	Full time role

Role	Responsibilities	Project Commitment
	Architect, VA SBE and/or Partner Team	

Table 4: Microsoft Team Project Roles and Responsibilities

5. GENERAL CUSTOMER RESPONSIBILITIES AND PROJECT ASSUMPTIONS

5.1 General Customer Responsibilities

Our delivery of the services are dependent on your involvement in all aspects of the services, your ability to provide accurate and complete information as needed, your timely and effective completion of the responsibilities as identified herein, the accuracy and completeness of the Assumptions, and timely decisions and approvals by your management. In addition to any Customer activities identified in the Approach section, you will perform the tasks, furnish the personnel, provide the resources, or undertake the responsibilities specified below.

- We will work with you to obtain workspace for each team member including desk, phone, network connection, internet access, print services, and PC space
- You will provide documentation required to successfully execute/complete this engagement are accessible and accurate.
- You will handle project risk mitigation
- You will name and make available as necessary for the duration:
 - A project leader (Client focal point)
 - A sponsoring manager or executive
 - Installation platform(s) system administrator(s)
 - Additional technical contacts who are participating in the installation and configuration
- You will assign at least one technical person during the implementation for the resolution of technical issues
- You will collaborate on data formats and data interchange between existing VA SBE systems and Portal and Analytics
- You will collaborate on communication methods for interchange, and communication security methods
- You will participate in periodic function reviews of OSDV solution components, user acceptance testing, and training
- You will actively participate in the software installation and configuration
- You will provide as necessary, access to persons skilled in and knowledgeable of the Client hosted environment, including network topology and hosted server operating system configurations
- The Client Project Leader will participate in midpoint progress review meeting
- Network connections for servers and workstations
- Connectivity of the servers to the Internet (for portal access to Web content)
- Internet access for our consulting personnel working on site.

In performing our services under this SOW and the applicable WO, we will rely upon any instructions, authorizations, approvals or other information provided to us by your project Manager or by any other personnel identified by your Project Manager.

5.2 Project Assumptions

The Services, fees and delivery schedule for this project are based upon the following assumptions.

- This SOW is considered the baseline scope document outlining Microsoft's responsibilities for the assistance. Any changes to those responsibilities will be considered a change in scope for the engagement. Any proposed change to the project scope must be put into written format and be submitted to MS during this engagement for review and consideration according to the change management process described above
- This SOW is generated based upon currently known information deemed to be accurate and correct
- All project resources will have the appropriate level of security access required to complete project-related efforts
- You staff will provide all content, graphics, data access, and essential project information in a timely manner
- You will provide all required hardware and software
- Work may be done off-site at the engagement manager and consultants joint discretion, but will be communicated to you ahead of time
- We will work with your staff to obtain temporary workspaces for team members that need to work onsite including: a desk, chair, telephone, and Internet access
- You will schedule the appropriate times to provide access to the network and other critical systems to perform work related to the completion of this project
- Your staff will assist in performing any system configurations required for the architected and approved system(s) to operate and will back systems up appropriately.

Microsoft Consulting Services Work Order

<i>(For Microsoft Internal Purposes Only)</i> MCS (WO Type 1)- (Public Sector)	Work Order Number: 20110616
	Project Code: 1-1DN679H
	Client ID: U8841747
	Client Type: Major
	Vertical Industry: State & Local Government/Education
	Customer Purchase Order Number:

This work order is made pursuant to the Microsoft Master Services Agreement – State & Local (Non-Standard) VA- (VA Contract #100326-MCS) (#U8841747) (the “**agreement**”) effective as of March 26, 2010, by and between Virginia Technologies Agency (“VITA”) and Microsoft Corporation (“Microsoft,” “MCS,” “we,” “us,” or “our”). As an “Affiliate” of VITA, Virginia State Board of Elections is permitted to utilize the agreement and enter into Work Orders with us. Virginia State Board of Elections is referred to as “you” in this Work Order. The terms of the agreement are incorporated herein by this reference. Any terms not otherwise defined herein will assume the meanings set forth in the agreement. This work order is comprised of this cover page and the work order terms below, which are incorporated herein by this

<i>Customer Invoice Information</i>				
Name of Customer	Virginia State Board of Elections	A/P Contact Name (This person receives invoices under this work order.) Matthew Davis		
Street Address	1100 Bank St	Contact	E-mail matthew.davis@sbe.virginia.gov Address	
City	Richmond	State/Province	Phone	(804)-864-8905
	Chester	VA		
Country	USA	Postal Code	Fax	(804) 371-0194
		23219		
<i>Invoicing</i>				
We will invoice you according to our fiscal monthly billing schedule for services performed and expenses incurred during the previous period. Our invoices for payment will be directed to your representative for payment at the address shown above.				
Customer must Select One:				
<input type="checkbox"/> Customer requires Purchase Order for payment of invoice: Please indicate Purchase Order No. here and send actual PO to Microsoft. _____				
<input type="checkbox"/> Customer does not require Purchase Order for payment of invoice. Provide Accounts Payable Name and Phone No.				
Source to confirm Per Diem limits – hotel, rental car, meals, etc. (if applicable):				
Contact Name:	Contact E-mail address:	Contact phone No.:		
Web site address:				
<i>Period of Performance</i>				
Services under this work order will commence on r around the Effective Date herein. This work order will expire on June 30, 2016 . In order for us to continue work after the expiration date, you and we must agree in writing to a new work order or an amendment to this work order identifying the new expiration date and any other terms upon which you and we agree.				
Payments to Microsoft should be made to the following, include reference to our invoice number: By Check: Microsoft Enterprise Services, P.O. Box 844510, Dallas, TX 75284-4510, or if by overnight delivery, Microsoft Enterprise Services, Lockbox #844510, 1401 Elm Street, Fifth Floor, Dallas, TX 75202				

By Wire: Microsoft Enterprise Services #844510, Acct 3750825354/ ABA#0260-0959-3, Bank of America, N.A.
By ACH: Microsoft Enterprise Services, Acct#3750825354/ ABA#11100001-2, Bank of America, N.A.
 Attachments required with Invoice (Status Reports/Time /Expense Breakouts, Other):

<i>Place of Performance/Project Point of Contact(Customer Satisfaction Contact)</i>		
Name of Customer	Same as above	Project leader (This person is your point of contact for all service-related matters under this work order.)
Street Address		Contact E-mail Address
City	State/Province	Phone
Country	Postal Code	Fax

By signing below the parties acknowledge and agree to be bound to the terms of the agreement and this work order.

<i>Customer</i>	<i>Microsoft Affiliate</i>
Name of Customer (please print) Virginia State Board of Elections	Name Microsoft Corporation
Signature	Signature
Name of person signing (please print)	Name of person signing (please print) David T. Gallagher
Title of person signing (please print)	Title of person signing (please print) Director of Contracts
Signature date	Effective Date

1. Services.

We will along with partner (Democracy Live) will perform for you work associated with this engagement. **This engagement will be performed in accordance with the Microsoft Service Line Offering (SLO) SL1 Enterprise Strategy Projects. Please note, the aforementioned is an internal Microsoft designation for service catalog offering and is provided for Microsoft internal audit purposes only.**

Technical activities associated with these Service Line Offerings are provided in the attached Statement of Work (“SOW”) entitled, “eBalloting-Portal Integration and Implementation Support for Virginia State Board of Elections” dated June 21, 2011. Any dates provided are estimates only. As this is a “Cloud” offering, some of the services will be performed at the place of performance identified on the cover page and other services will be performed at remote facilities. All off-site services will be coordinated with your project leader for the services. Because we are performing the services under your direction, based on an estimated period of performance and fees, we do not warrant that any services deliverables will be completed or be satisfactory to you within the estimated period or fees.

See Attached SOW

2. Fees.

You will pay the following hourly rates and any reasonable out of pocket travel and living expenses (if any) for the individuals assigned. We reserve the right to utilize whichever labor categories in whatever quantities we determine, in our sole discretion, are appropriate to perform the services. Any total fee and labor hours stated are estimates only. The fees do not include fees for products. Unless otherwise specified in the invoice, you will pay us within 30 calendar days of the date of our invoice.

Labor Category/Activity	Units	Description	Rate	Proposed Cost
Associate Technician	0	Hours	\$ 103.00	\$0
Technician	0	Hours	\$ 129.00	\$0
Technician I	0	Hours	\$ 155.00	\$0
Technician II	0	Hours	\$ 180.00	\$0
Technician III (Democracy Live)	1580	Hours	\$ 206.00	\$325,480
Technician IV	0	Hours	\$ 232.00	\$0
Technician V	0	Hours	\$ 250.00	\$0
MCS Associate Consultant	0	Hours	\$ 214.00	\$0
MGD Consultant (Test & QA)	400	Hours	\$ 73.00	\$29,200
MCS Senior Consultant (Arch)	160	Hours	\$ 256.00	\$40,960
MCS Principal Consultant	0	Hours	\$ 276.00	\$0
MCS Project Manager	0	Hours	\$ 256.00	\$0
MCS Engagement Manager	120	Hours	\$ 256.00	\$30,720
MCS Practice Manager	0	Hours	\$ 271.00	\$0
MCS General Manager	0	Hours	\$ 271.00	\$0
MCS Principal Consultant	0	Hours	\$ 271.00	\$0
MCS Architectural Consultant	0	Hours	\$ 286.00	\$0
	2260	TOTAL HOURS		\$426,360
Proposed Travel Cost				\$0
Estimated Total				\$426,360.00

3. Your responsibilities. In addition to your responsibilities described in Section 1, “Services”, above, you will, at your expense, provide us the following:

- a. access to all necessary on-site facilities, including office space, telephones, analogue modems or PPTP, computer equipment, internet access, and test and monitoring equipment;
- b. access to and copies of relevant technical information;

- c. access to and sufficient time with your technical, management, and other personnel as necessary for us to perform the services; and
- d. a project leader as your primary point of contact with us and to provide technical direction to our personnel performing the services.

4. **Ownership and license.**

- a. **Products and fixes.** All products and fixes provided pursuant to this work order shall be licensed according to the terms of the license agreement packaged with or otherwise applicable to such product. You are responsible for paying any licensing fees associated with products. “**Product**” means any computer code, web-based services, product-related solutions or materials comprising commercially released, pre-release or beta products (whether licensed for a fee or no charge) and any derivatives of the foregoing we make available to you for license which is published by us, our affiliates, or a third party. “**Fixes**” means product fixes that we either release generally (such as commercial product service packs) or that we provide to you when performing services (such as workarounds, patches, bug fixes, beta fixes and beta builds) and any derivatives of the foregoing.
- b. **Pre-existing work.** All rights in any computer code or materials (other than products or fixes) developed or otherwise obtained independently of the efforts of a party under this work order (“**pre-existing work**”) shall remain the sole property of the party providing that pre-existing work. During the performance of the services for this work order, each party grants to the other party (and our contractors as necessary) a temporary, non-exclusive license to use, reproduce and modify any of its pre-existing work provided to the other party solely for the performance of such services. Upon payment in full, we grant you a non-exclusive, perpetual, fully paid-up license to use, reproduce and modify (if applicable) our pre-existing work in the form delivered to you as part of the service deliverables for your internal business operations. “**Service deliverables**” means any computer code or materials (other than products or fixes) that we leave with you at the conclusion of our performance of service(s). Your licenses to our pre-existing work is conditioned upon your compliance with the terms of the agreement and this work order and the perpetual license applies solely to our pre-existing work that we leave to you at the conclusion of our performance of the services.
- c. **Developments.** Upon payment in full, we assign you joint ownership in all rights in any computer code or materials (other than products, fixes or pre-existing work) developed by us (or in collaboration with you) and provided to you in the course of performance of this work order (“**developments**”). “**Joint ownership**” means each party has the right to independently exercise any and all rights of ownership now known or hereafter created or recognized, including without limitation the rights to use, reproduce, modify and distribute the developments for any purpose whatsoever, without the need for further authorization to exercise any such rights or any obligation of accounting or payment of royalties, except you will only exercise your rights for your internal business operations and you will not resell or distribute the developments to any third party. These use restrictions shall survive termination or expiration of this work order or the agreement. Each party shall be the sole owner of any modifications that it makes based upon the developments.
- d. **Affiliates rights.** You may sublicense the rights to the service deliverables granted hereunder to your affiliates, but your affiliates may not further sublicense these rights. Any sublicensing of the service deliverables to your affiliates as permitted by this Section 4 must be consistent with the license terms in the agreement and this work order. If “**affiliate**” is not defined in the agreement, it means (i) if you are a commercial entity, legal entities that you own, which own you, or which are under common ownership with you; and (ii) if you are a state or local government agency, any government agency, department, instrumentality, division, unit or other office of your state or local government that is supervised by or is part of you, or which supervises you or of which you are a part, or which is under common supervision with you; together with, as mandated by law, any county, borough, commonwealth, city, municipality, town, township, special purpose district, or other similar type of governmental instrumentality located within your state’s jurisdiction and geographic boundaries; provided that a state and its affiliates will not, for purposes of this definition, be considered to be affiliates of the federal government and its affiliates. “**Ownership**” means more than 50% ownership.

- e. **Open source license restrictions.** Because certain third party license terms require that computer code be generally (i) disclosed in source code form to third parties; (ii) licensed to third parties for the purpose of making derivative works; or (iii) redistributable to third parties at no charge (collectively, "excluded license terms"), the license rights that each party has granted to any computer code (or any intellectual property associated therewith) do not include any license, right, power or authority to incorporate, modify, combine and/or distribute that computer code with any other computer code in a manner which would subject the other's computer code to excluded license terms.

Furthermore, each party warrants that it will not provide or give to the other party computer code that is governed by excluded license terms.

- f. **Reservation of rights.** All rights not expressly granted in this Section 4 are reserved.

- 5. **Cost or Pricing Data.** We will not, under any circumstances, accept work that would require the submission of cost or pricing data.

Evaluation of Technology Options for Providing Advanced UOCAVA Solutions to Virginia

I. Introduction

ES&S and Scytl wish to partner with the Virginia State Board of Elections for a research and development project designed to further the body of knowledge and strengthen the concepts and technology for advanced UOCAVA solutions. This project will be targeted at specific Virginia customs and scenarios but will consider application to other similar jurisdictions. Technology solutions will be examined in the following technology categories for significance, sustainability, impact, innovation, and scalability:

- Accessibility
- Secure Electronic Return
- Mobile Voting Station

This project will employ a thorough and established research methodology and will be structured in distinctive phases. The research methodology includes data gathering, testing and the review of technology, tools, processes and practices, the development of findings, recommendations and deliverables, and the dissemination of work products. All research, analysis, and findings of the project will be transferrable to other jurisdictions and will likely be a foundational project in the development of future UOCAVA voting.

The project will be organized into two structured stages. The first stage will provide for the research and technology analysis. The second stage will consider a proof of concept and reporting.

For each category, the first stage will consider the prior research, socio-demographic issues, stakeholder concerns, potential technology solutions, and the business case for each technology solution option. The following are potential questions that should be addressed during the first stage:

- What are the high-level screening criteria and immutable technical and business requirements for each technology category? These represent the end user and stakeholder needs.
- What provisions in each of these categories are potentially helpful for Virginia UOCAVA voters?
- What technology options are available or could be developed to provide these provisions and meet the technical and business requirements?
- What procedural and administrative changes would be required to implement these technologies?
- What benefits and risks do these present over the current UOCAVA processes?

- Is it feasible to make these technological and procedural changes to the current voting paradigm?
- What is the business case for each of these technology options? (i.e. cost-benefit ratio, initial cost vs. ongoing cost)

The first phase will conclude with a technology white paper examining the options for each of the categories and how each one addresses:

- significance to UOCAVA voters,
- sustainability and cost-effectiveness over time,
- impact to UOCAVA voters and local election officials,
- scalability to address future needs, and
- return on investment for tangible items (monetary) and intangible (improvements to absentee voting).

The second stage will begin with a selection of the most promising technology options to include in a technology proof of concept as a pilot program. The proof-of-concept (PoC) will provide validation of research and return valuable feedback from stakeholders. The PoC will also produce quantitative data which can be used to draw reliable and reputable conclusions. Depending on the technology selected by the Virginia State Board of Elections, this pilot could be executed in select counties for an official election or in a private or mock election environment. At the close the project, Virginia will retain the pilot system for possible future use.

II. Technology Categories

i. Accessibility

The accessibility technology category would explore solutions for providing assistive technologies to voters with disability issues. The research and proof of concept efforts will focus on how to provide assistance in a reliable and private way to voters in stateside military hospitals as well as overseas locations. The technology options will address the following issues:

- Blindness
- Visual impairment such as low vision or color blindness
- Manual dexterity disability
- Cognitive issues
- Hearing disabilities
- Mobility disabilities
- Speech disability
- English learned as a second language

- Dyslexia

ii. **Secure Electronic Return**

The secure electronic return category will explore the security and administrative requirements for technology solution that provide secure electronic return. This will cover the use of electronic mail, fax, secure transfer, and other electronic communication channels. This research will explore how to provide electronic return to meet the following criteria:

- Eligibility. Only authorized voters should be able to vote.
- Privacy. The technology has to protect voter privacy, concealing the relation between voter and his/her cast vote, and ensuring that the voter's choice will remain anonymous.
- Integrity. A technology has to protect the vote against manipulation once it is cast and until it is counted.
- Voter verifiability. Voters must have the possibility to check if their votes have been cast as intended and accurately recorded.
- Voter inclusion. Voters must have the possibility to verify the inclusion of his/her vote in the final tally.
- Prevention of intermediate results. The technology shall prevent the disclosure of intermediate results before the election is closed.
- Ballot box accuracy. Protection against the addition of bogus ballots or the elimination of valid ballots (ballot stuffing).
- Coercion and vote buying resistance. One of the main concerns of remote voting channel is that it facilitates coercion or vote buying. Therefore, it is important to verify if the channel facilitates these practices or includes countermeasures to mitigate them.
- Channel reliability. Ability to detect delivery delays or denial of service attacks in an appropriate timeframe.

iii. **Mobile Voting Station**

The technology category will explore the idea of sending mobile voting stations with military deployments. This could be a suitcase-sized voting station which contains all the necessary provisions for a voter to conduct absentee ballot processes while deployed. There is potential for this technology to impact voters of Navy ships and those deployed into combat zones. The research will explore the potential for this technology, the requirements surrounding its deployment, and its potential impact on the military units which would utilize it.

III. Project Management and Oversight

To execute the project, Virginia would work ES&S and Scytl as well as two seasoned academic researchers from the grant award date through the 2012 General Election. The State Board of Elections would provide overall project direction and decisions for the project and research teams who will work on their behalf to perform the activities in the project.

i. Project Organization

Project Director

The Virginia State Board of Elections will serve as the project director. The project director manages the strategic aspects of the project, oversees the steering committee, reviews major deliverables, and provides direction to the project manager.

Project Steering Committee

The project steering committee will be comprised of the project director, project manager, key personnel from the ES&S and Scytl, high level stakeholders, and research experts. The steering committee will provide guidance to the project director and will ensure alignment of project with Virginia's strategic goals and objectives.

Project Manager

Scytl will provide the project manager for the duration of effort. The project manager is responsible for the day to day operations, will coordinate the entire team involved in the project and ensure the appropriate execution. The project manager will interact directly with the State of Virginia and FVAP (as needed), providing expert background on these types of projects.

Scytl's project management team combines deep election technology expertise and strategy capabilities to cover the entire scope of election modernization - from advising governments in developing an election modernization strategy to recommending and implementing solutions for optimizing governments' current infrastructure and applications. Our project managers take the time to analyze the current situation in order to bring the best strategic plan to face new challenges and accompany the customer, every step of the way.

Project Team

The project team will be comprised of members of the election experts from Scytl and ES&S, to include ES&S's local component in Virginia – PrintElect. The project team will report to the project manager and will be responsible for involving stakeholders at all levels and performing various project tasks.

Research Team

The research team will be comprised of members of Scytl's Research and Development department along with Thad Hall and Michael Alvarez. In their academic careers, these researchers have focused on elections, voting behavior, election technology, and research methodologies. The addition of these experts will enhance the quality of the program's research, assist in the technology evaluation, and provide insight into tackling some of the prevalent challenges facing UOCAVA voters.

Stakeholders

The project team will work with the Virginia State Board of Elections to ensure all stakeholders are considered and given the opportunity to participate in the project's activities and steering commit. This includes representatives from the Virginia National Guard, representatives from Virginia military hospitals, and local election officials.

ii. ***Project Resources***

Aaron Wilson, Scytl Project Engineer

Mr. Wilson serves Scytl as a project manager and engineer for its U.S.-based electoral modernization projects. He has managed multiple electoral modernization projects for a dozen counties and states in recent years. Mr. Wilson joined Scytl from a background in both the elections and defense industries. He was previously an auditor for the Florida Division of Elections' Bureau of Voting System Certification. Before joining Scytl he was an embedded software engineer for Lockheed Martin's information assurance department. With the Florida Division of Elections, Aaron tested various voting systems at the state and county level and is an expert in a variety of voting technologies. Mr. Wilson is a Systems Security Certified Practitioner (SSCP) and received his Bachelor of Science in Computer Engineering from Florida State University.

In this project he will coordinate Scytl's efforts in all the areas required for a successful completion.

Peter Zelechowski, ES&S Vice President International Product Development

Mr. Zelechowski has 9 years experience in the voting systems business sector working at county and state levels in the U.S. and in international countries defining, customizing, deploying and operating voting systems in elections. Mr. Zelechowski has experience as president, board, committee chair and committee member levels for large and small non-profit and not-for-profit groups. With 30+ years experience in computer systems, he has hands-on experience with data interchange in financial, business, and election

applications and as an architect for computer systems integration across platforms, networks, and security boundaries. Mr. Zelechowski is a Certified Information Systems Security Professional (CISSP), Certified Information Systems Auditor (CISA), a member of IEEE P1622, Voting Systems Electronic Data Interchange standards workgroup, and a member OASIS EML task group (Election Markup Language). He has a Master of Business Administration in Technology Management.

Ingrid Giordano, Scytl Regional Sales Manager

Ms. Giordano serves Scytl as a Sales Manager and Elections Specialist for its U.S. based electoral modernization projects. She has 20+ years of experience working for voting systems industry leaders. She was previously the Election Services Manager and Public Relations Manager for Global Elections Systems (Diebold/Premier). She was the Virginia Regional Sales Manager for Advanced Voting Solutions and Sales Director for Vote Here of Bellevue, WA. Ms. Giordano has also served Sequoia Voting Solutions and Dominion Voting Systems as Elections Specialist and Customer Service Manager in New York State. Ingrid has certified, sold, implemented, installed and supported election solutions in 25 US states and Canada. Ms. Giordano is based in Henrico, VA.

Tyler Lincks, Virginia Account Manager for Printelect

Mr. Lincks serves Printelect as the Virginia Account Manager addressing the needs of Virginia localities with voting equipment, service and supplies. He has 20 years of proven performance in elections management and operations in the private and public sectors in 32 states and Canada. Established and managed infrastructure for training, implementation, and technical support across a variety of elections platforms, including touch screen, optical scan systems and e-voting solutions. Mr. Lincks began his career at the State Board of Elections in Virginia and has served the elections industry with Global Election System (Diebold/Premier), Advanced Voting Solutions, Sequoia Voting Solutions/ Dominion Voting Systems. He has also contributed as a voting member of the Election Technology Council. Mr. Lincks is based in Henrico, VA.

Jordi Puiggali, Scytl VP Research and Development

Mr. Puiggali has headed Scytl's Research & Development Department since the formation of the company. Mr. Puiggali has been instrumental in the development of Scytl's technology and intellectual property, co-authoring numerous international patents on application-level cryptography and e-voting security. Prior to joining Scytl, Mr. Puiggali was the Technical Director for PKI and security projects at the IT department of the Autonomous University of Barcelona. Mr. Puiggali has also actively collaborated with the cryptographic research group of the Department of Computer Science at the

Autonomous University of Barcelona where he co-directed research projects on PKI and applied cryptography. Mr. Puiggali is a security expert and has participated as a speaker and lecturer in numerous international conferences on computer security and applied cryptography. Mr. Puiggali has a bachelor degree in Computer Engineering from the *Universitat Autònoma de Barcelona*.

In this project he will participate in assessing and documenting the different technology options, providing insight on improvements and potential software implementations.

Thad E. Hall, Ph.D.

Thad Hall is an associate professor of political science at the University of Utah. His primary research is in the area of public administration and public policy, with a focus on election administration and policy development in legislatures. He has authored or coauthored five books, most recently, *Electronic Elections: The Perils and Promise of Digital Democracy* (Princeton University Press) and *Abortion Politics in Congress: Strategic Incrementalism and Policy Change* (Cambridge University Press).

Hall has also published more than 20 research articles and book chapters and his research has been supported by The Pew Charitable Trusts, Carnegie Corporation of New York, the Election Assistance Commission, the Smith Richardson foundation, and the IBM Center for the Business of Government. He has testified before the United States Election Assistance Commission and the United States Senate Judiciary Committee.

Hall has conducted many studies on election administration and reform, including studies on Internet voting, electronic voting, election auditing, public attitudes toward various aspects of the voting process, poll worker attitudes toward the election process, and observational studies of election administration in the United States and abroad.

He has a Ph.D. from the University of Georgia (2002), a Masters in Public Administration from Georgia State University (1992) and a B.A., with honors in political science, from Oglethorpe University (1990). Before coming to the University of Utah, he worked as a Program Officer for The Century Foundation in Washington, D.C., a policy analyst for the Southern Governors' Association in Washington, D.C., and in various positions for Georgia Governor Zell Miller.

Mr. Hall will participate as a member of the project's research team.

R. Michael Alvarez, Ph.D

R. Michael Alvarez received his B.A. from Carleton College, and his Ph.D. from Duke University, both in political science. He has taught at the California Institute of Technology his entire career, focusing on elections, voting behavior, election technology, and research methodologies. He has written or edited a number of books (most recently,

New Faces, New Voices: The Hispanic Electorate in America) and scores of academic articles and reports.

He has studied elections throughout the world, including recent research in Argentina and Estonia, and has worked closely with public officials in many locations to improve their elections. Alvarez's research has been funded by the National Science Foundation, the John S. and James L. Knight Foundation, the Pew Charitable Trusts and JEHT Foundation, the Carnegie Corporation of New York, and the John Irvine Foundation. He was named to the Scientific American 50 in 2004 for his research on voting technologies. Alvarez is a Fellow of the Society for Political Methodology, co-editor of the journal Political Analysis, and co-director of the Caltech/MIT Voting Technology Project.

Mr. Alvarez will participate as a member of the project's research team.

Jesús Choliz, Scytl Security and Accessibility Expert

Jesús Choliz joined Scytl as a Security Expert in the Research and Development Department (R&D) where he participates in securing the solutions developed by Scytl, and performing security audits. He has more than 10 years of experience in IT Security, dedicating 6 of them at the multinational consulting firm Ernst & Young. As the Manager of the IT Audit Department at Ernst & Young, Jesús has performed audits and advisory projects in security issues for the most important companies of Spain, including public sector, financial entities, assurance companies, and large infrastructure and logistic companies. Prior to joining at Scytl and working for Ernst & Young, Jesús was working in the R&D Department of a Software Development Company focused in auditing and monitoring systems (Tango/04). He is CISA (Certified Information Systems Auditor), CISM (Certified Information Security Manager) and CRISC (Certified in Risk and Information Systems Control) by ISACA, PMP (Project Management Professional) certified by Project Management Institute (PMI), and ISO27001 Lead Auditor by BSI. He is member of Information Systems Audit and Control Association (ISACA), ISMS-Forum, and PMI.

In this project he will participate in assessing the security, accessibility, and risks related to the different technology options, as well as to the software developed for the PoC, providing expertise and insight on improvements and potential changes.

Gabriel Dos Santos, Scytl VP Software Development

Mr. Dos Santos joined Scytl as Technical Manager in March 2004 and is currently the Vice-President of Software Engineering. In his current position, Mr. Dos Santos is responsible for the software development and engineering of Scytl's family of software

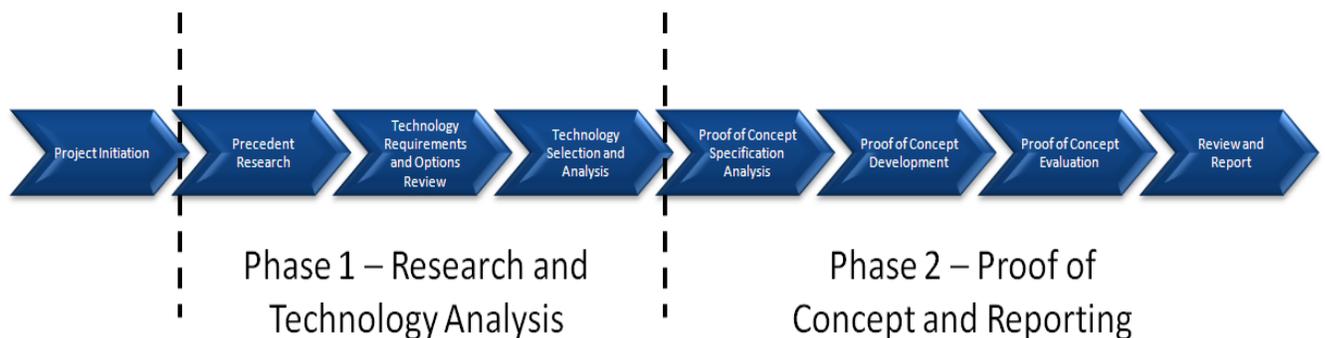
solutions and for the implementation of these solutions in commercial projects. In his previous position at Scytl as Technical Manager for Pnyx.core, Mr. Dos Santos was instrumental in the development and evolution of Scytl's core security solution for Internet voting and participated in numerous projects in Europe, Asia and America. Mr. Dos Santos has over 12 years of IT experience in software development working for companies in Spain and Argentina in projects for the United Nations, Bank Boston, Banco Sabadell, T-Systems and the Catalan government. Mr. Dos Santos holds an M.S. degree in Computer Science from the University of Buenos Aires.

In this project he will lead the development tasks required for the Proof of Concept software.

IV. Project Proposal

The proposed approach to researching and piloting potential technology options for future UOCAVA voting will follow structured stages outlined below:

- Project Initiation
- Phase 1: Research and Technology Analysis
 - Precedent Research
 - Technology Requirements and Options Review
 - Technology Selection and Analysis
- Phase 2: Proof of Concept and Reporting
 - Proof of Concept Specification Analysis
 - Proof of Concept Development
 - Proof of Concept Evaluation
 - Review and Report



i. Project Initiation

The project team will hold a project kick-off meeting to establish lines of communication among team members and to establish the work plan. The project initiation will also establish the steering committee, which will be comprised of Virginia SBE representatives, subject matter experts and other stakeholders who will provide ongoing advice and guidance to the project team throughout the project as required. At this time, the project team will work with Virginia SBE to confirm the major themes of inquiry and the potential causal relationships to be explored in the technology research an analysis, including levels of success, costs, and potential impact of the findings and results of the project.

Key Activities

- Conduct kick-off meeting between Virginia Elections and the project team
- Confirm project scope; and
- Create finalized project management plan and schedule.

Deliverables

- Project Plan;
- Project Schedule (tasks, subtasks);
- Resources scheduling and plan;
- Communication Framework;
- Change Management; and
- High level Risks and Mitigation Plan.

ii. Research and Technology Analysis

a. Precedent Research

In this stage, the project team will determine the best methods for measuring the effectiveness, security and practicality of technology solutions in each of the technology categories by identifying high-level screening criteria, such as immutable technical and business requirements. The team will utilize the extensive national and international research currently available in its examination of solutions developed, implemented and/or considered by various external jurisdictions. This will include a review and aggregation of research previously conducted by Scytl, Thad Hall, and Michael Alvarez.

Scytl has conducted extensive research on absentee voting, its challenges, benefits and concerns—both technologically and socio-demographically—and has produced numerous publications and participated in multiple international conferences regarding solutions similar in scope and size to that addressed in this project. Access to Scytl’s frequently cited bodies of work will allow our proposed team to ramp up quickly on the current environment, concerns, and options available to the assisting of the UOCAVA voting community.

Further, the inclusion of Scytl and academic experts in the project will prevent duplicating research efforts currently made through other e-voting projects. In fact, Scytl has been contributing actively to the research in this area, participating in the evaluation and implementation of various remote voting systems, as well as advising governmental institutions and private companies on the proper implementation and evaluation of the remote voting process.

Systems Research

Systems Research will include research on the UOCAVA solutions and technologies which are currently deployed in Virginia and other states. The study will evaluate a range of different implementations of these technologies including various vendor implementations, applications, and usages. It will also capture technology variations that exist due to accessibility and usability requirements as well as deployment scenarios such as in-person absentee, mail absentee, and Election Day voting. This portion of study is critical to determining which technology options will be most effective and the extent to which this technology will impact the current technology infrastructure.

Socio-Demographic Research

The research effort will not only include technological considerations for security, accessibility, privacy, infrastructure, etc., but will also examine critical socio-demographic factors to determine feasibility and appropriateness of technology for different stakeholder groups. Using the knowledge gained through research of existing studies done on voter interaction with UOCAVA voting solutions, the project team will develop a set of guiding principles by which to question the technologies' procedural, administrative, and usability impact on the stakeholder groups. The study will be based on previous works and will include first person and third person accounts. Results of this study will address:

- Voting population's ability to use and appreciate UOCAVA absentee voting solutions.
- Voting populations desire and likelihood to use accessible, secure electronic return or mobile voting station technologies.
- Election officials ability to and satisfaction with current methods and systems for UOCAVA absentee voting
- Election officials likelihood to use technologies for accessibility, secure electronic return or mobile voting stations
- Other stakeholder's satisfaction with current UOCAVA voting solutions.
- External auditors' likelihood to deploy and use technologies for accessibility, secure electronic return or mobile voting stations

Key Activities

- Identify high-level technical and business criteria;
- Research of technical factors;
- Research of socio-demographic factors;
- Conduct research on principles of accessible, secure electronic return or mobile voting station technologies; and
- Conduct preliminary interview sessions with key staff and stakeholders.

Deliverables

- A research summary on principals of current UOCAVA voting solutions; and
- A research summary on principals of accessible, secure electronic return or mobile voting station technologies.

b. Technology Requirements and Options Review

Utilizing the information compiled during the research portion of the project, the team will work to develop the principles, business drivers and other criteria against which potential technology options will be evaluated. Taking what is known about critical technological and socio-demographic considerations for UOCAVA solutions, a numerical value will be assigned to each feature based upon an agreed scale of importance/relevance with the steering committee.

Based on preliminary examination of the existing bodies of research and understanding of UOCAVA voting, it is clear that advanced technology implementation will impact many aspects of voting process. Therefore, in order for a solution to be a viable option, it must provide benefits to voters but also not affect other criteria required for a reliable and secure voting solution, such as:

General Technical Evaluation Criteria

- Scalability. Support for the management of multiple or large elections.
- Performance. Number of votes processed in any time interval.
- Cost. Infrastructure and service cost.

Security Evaluation Criteria

- Eligibility. Only authorized voters should be able to access the solution.
- Privacy. The technology has to protect voter privacy.
- Integrity. A voting system has to protect sensitive data against manipulation.
- Prevention of intermediate results (if applicable). The voting system shall prevent the disclosure of intermediate results before the election is closed.
- Ballot box accuracy (if applicable). Protection against the addition of bogus ballots or the elimination of valid ballots (ballot stuffing).
- Coercion and vote buying resistance.

- Channel reliability. Ability to detect delivery delays or denial of service attacks in an appropriate timeframe.

Usability Evaluation Criteria

- Prevention of voting errors. The voting technology has to prevent involuntary voting errors by voters when casting their votes (e.g., under-voting, over-voting).
- Ease of use. The voting technology must be easy to use by average voters.
- Accessibility. Disabled voters should be allowed to vote with total privacy without the need of assistance from third parties, and multi-lingual support (official languages).

Election Management Evaluation Criteria

- Election set-up. The voting technology has to be suitable to carry out a single election set-up.
- Voting period election management. The voting technology has to be easy to manage during the voting period.
- Counting process (if applicable). It is important that the voting technology does not delay the current counting process.
- Auditing. Voting technology must provide means for facilitating the audit of the events to ensure its correct execution.

Socio-Demographic Evaluation Criteria

- Probability of user adoption. The voting technology should be usable through existing technology, and the field research should show public willingness/desire to use the provided option.

This activity will outline the principles, business drivers, and technical criteria established as metrics to evaluate available end-to-end verifiable e-voting options. By establishing a numerical value for each evaluation criteria, available options can be scored and ranked quickly and efficiently for the later purpose of developing a proof of concept for selected technologies.

Key Activities

- Facilitate discussion and decisions about ranking and weighting of technology provisions, business drivers, and other criteria required for a practical end-to-end verifiable e-voting technology.

Deliverables

- Finalized principles, business drivers, and technical criteria; and

- Documentation outlining and explaining the requirements, business drivers and criteria, including technical scoring.

c. Technology Analysis and Selection

Applying the evaluation criteria agreed upon, the project team will evaluate the viability of options for each of the technology categories – accessibility, secure electronic return, and mobile voting station. The evaluation will include a technical and operational assessment of each potential technology with the steering committee, including but not limited to risk assessment evaluation, implementation cost, user acceptance level, technology requirements, legal requirements, election management complexity, and public awareness. The analysis will conclude with a technology white paper examining the options for each of the categories and how each one addresses:

- the significance to UOCAVA voters,
- the sustainability and cost-effectiveness over time,
- the impact to UOCAVA voters and local election officials,
- the scalability to address future needs, and
- the return on investment for tangible items (monetary) and intangible (improvements to absentee voting).

Key Activities

- Application of the agreed criteria on available technologies;
- Evaluation of the viability of available technologies; and
- Selection of technologies for proof of concept.

Deliverables

- Research methodologies used and preliminary research undertaken;
- Options considered with scoring;
- Evaluation of options against principles, business drivers, and other criteria;
- In depth information about each option presented; and
- Selection made for the proof of concept.

iii. Proof of Concept and Reporting

a. Proof of Concept Specification Analysis

Based on the technology selection in phase 1, phase 2 will begin with a specification analysis. This will provide detailed design information for the development and/or integration of the technology selected for a proof of concept. Furthermore, this activity will also develop a full PoC plan, including where to pilot the technology and how to measure the outcome.

b. Proof of Concept Development

The proof of concept develop will take the design considerations from the specification analysis and develop the software and integration tools necessary to meet the PoC requirements. This will include tools specifically for collecting data and analyzing it (where possible). This sub-phase will conclude with the deployment and operation of the proof of concept according at the direction of the project director and steering committee.

c. Proof of Concept Evaluation

After the conclusion of the proof of concept, the research team will collect data, analyze it according the criteria established and report their findings to the steering committee. The steering committee will further direct the evaluation and produce conclusions with the research team. The evaluation will also provide recommendations for how the technology can be enhanced if necessary and used in future elections. Virginia will retain the solutions developed for the pilots.

d. Review and Report

The project team and the steering committee will prepare a final report will be prepared during the review and report and deliver it at the conclusion of the grant performance period. The final report will include the final data collected; an analysis of the data; a report of important technological, environment, procedural, and circumstantial factors; findings; and conclusions for each of the following areas:

- Overall
- Financial
- Security
- Significance
- Sustainability
- Impact
- Strategy
- Innovation
- Scalability
- Collaboration
- Cost vs. Benefits

V. Why Scytl and ES&S?

i. ES&S Corporate Overview

Election Systems and Software, Inc. (ES&S) is the largest elections-only company in the world. ES&S provides voter tabulation (VT), voter registration (VR) and election training systems and

services to clients ranging in size from small county governments and individual organizations to state boards of elections and international governments.

ES&S is a privately owned Delaware corporation that entered the elections industry in 1969. The company was incorporated in 1979 as American Information Systems and subsequently incorporated as ES&S in 1997 upon its acquisition of the elections division of Business Records Corporation. ES&S acquired Premier Election Solutions on September 3, 2009. The combined company, Election Systems & Software, Inc. (ES&S) is headquartered in Omaha, NE.

In order to achieve the company's vision of greater efficiency and accessibility to its customers, ES&S has employees positioned from coast to coast to ensure that the company maintains voter confidence and enhances the voting experience for all customers. The company maintains nine facilities across the United States and has Canadian offices in Pickering, Ontario and Vancouver, British Columbia.

ii. **Scytl Corporate overview**

Scytl is a software company specializing in the development of highly secure election modernization solutions. These solutions incorporate unique cryptographic protocols that enable election administrators to carry out all types of election processes in a completely secure, transparent and auditable manner. Scytl's advanced election security technology positions the company as a worldwide leader in the election modernization space.

Scytl was formed as a spin-off from a leading research group at the Autonomous University of Barcelona. This group has pioneered the research on election security since 1994 and has produced significant scientific results, including over 30 scientific papers published in international journals and the first two Ph.D. theses on electronic voting security, by Prof. Joan Borrell and Scytl's founder Dr. Andreu Riera (in 1996 and 1999, respectively). Scytl's unique election security technology derives from over 16 years of pioneering R&D and is protected by a portfolio of international patents.

Scytl has customers both in the public and private sectors. The former are Federal, State and Local governments which license Scytl's election modernization products to carry out their elections by electronic means. The latter are large corporations and organizations that choose Scytl's technology to carry out by electronic means election/consultation processes such as labor union elections or shareholders' meetings. Some of these customers represent leading references in the election modernization field (e.g., governments in France, Norway, Austria, Spain, Switzerland, United Kingdom, Philippines, Argentina, Mexico, Finland, United States, Australia, etc.).

Scytl's headquarters are located in Barcelona, Spain, with offices in the Baltimore (MD), Jacksonville (FL), Richmond (VA), Seattle (WA), London, Toronto, New Delhi, Bratislava and Singapore.

3 areas of research and proof of concept covered

1. Accessibility
2. Secure Electronic Return
3. Mobile Voting Station

Budget Breakdown Categories

Budget Category	Full Estimate	Estimate for FVAP Grant Submission
Research and Analysis (Phase 1) <ul style="list-style-type: none"> • 8 months (August to April) 	\$175,000.00	\$125,000.00
Proof of Concept and Reporting (Phase 2) <ul style="list-style-type: none"> • 4 months for PoC Development • 3 months for deployment and operation • 1 month for analysis and reporting 	\$350,000.00	\$275,000.00

- Includes:
- Personnel
 - Project Team (Project Management is assumed to be handled by Virginia)
 - Research Team
 - Activities
 - Precedent Research in each of the 3 technology categories
 - Technology Requirements and Options Review for each of the 3 technology categories
 - Technology Selection and Analysis for each of the 3 categories

- Includes:
- Personnel
 - Project Team
 - Solution Development Team (software developers, system engineers, quality assurance engineers)
 - Research Team
 - Activities
 - PoC Specification Analysis for 2 technology options
 - PoC Development for 2 technology options
 - PoC Evaluation for 2 technology options
 - Review and Report for whole project
 - Other
 - Hardware, as needed
 - Software Licenses, as needed

Virginia Voter Registration System Modifications

Virginia (VA) current has a statewide voter registration and election management system known as the Virginia Election and Registration Information System (VERIS). VERIS was built by Quest Information Systems (Quest) and VA currently maintains an annual maintenance agreement with Quest for VERIS.

In order for the new voter portal to be fully functional and interactive with VERIS, VA will need to seek some modifications to VERIS that are not covered under the annual maintenance agreement. The following is an itemized list of the necessary changes and the estimated cost of each change. The costs estimates are based off of previous change requests issued by the Virginia State Board of Elections (SBE) to Quest.

1. Creation of Web Service Layer
 - a. Estimated Cost - \$100,000
 - b. Details - SBE will seek to have a series of secure web services built on top of the VERIS database that will enable the voter portal and analytics tool to input and extract information from VERIS. These services will be built to use the same common data standards being used by the voter portal and analytics tool.
2. Creation of Absentee Ballot Application Hopper
 - a. Estimated Cost - \$50,000
 - b. Details – SBE will seek to have a new feature added to VERIS. This hopper will enable the local General Registrars to view and process absentee ballot applications completed on the voter portal. When a voter successfully completes an absentee ballot application (state or FPCA), a record will appear in this hopper for the voter’s General Registrar alerting them that an application is forthcoming. Once the form is physically received, the General Registrar can process this hopper record, updating the voter’s record in VERIS.
3. Creation of Online Voter Registration Hopper
 - a. Estimated Cost - \$50,000
 - b. Details – SBE will seek to have a new feature added to VERIS. This hopper will enable the local General Registrars to view and process voter registrations and changes of address completed on the voter portal. When a voter successfully completes a voter registration form or change of address form, a record will appear in this hopper for the voter’s General Registrar alerting them that a registration form is forthcoming. Once the form is physically received, the General Registrar can process this hopper record, adding or updating the voter’s record to the state’s registration records.
4. Creation of Absentee Voting Hopper
 - a. Estimated Cost - \$50,000
 - b. Details – SBE will seek to have a new feature added to VERIS. This hopper will enable the local General Registrars to process absentee ballots (both LiveBallot and FWAB) completed on the voter portal. When a voter successfully completes

a ballot on the portal, a record will appear in this hopper for the voter's General Registrar alerting them that a ballot is forthcoming. Once the ballot is physically received, the General Registrar can process this hopper record, updating VERIS to indicate that the voter has voted.