Indiana Voting System Technical Oversight Program (VSTOP)
The Bowen Center for Public Affairs
Ball State University

Voting System Certification Recommendation Report

Name of Company	Election Systems & Software
Address	11208 John Galt Boulevard, Omaha, NE 68137
Contact Information	Mark Manganaro, (402) 938-1399
Application For	Evaluation of a New Voting System
Model Number	EVS 5.2.4.0
Description	This system is a paper-based end-to-end Election Management System (EMS) that supports a jurisdiction's election needs by creating and maintaining a central election database, formatting and printing ballots, programming election equipment and collection and reporting of election results.
Type of Voting System	Optical Scan Ballot Card Voting System
Application Date [Attachment 1]	June 21, 2018 Revised on August 13, 2018
Escrow Agent and Deposit Date	Iron Mountain – June 14, 2018
Voting System Testing Lab (VSTL) [Attachment 2]	Pro V&V, 700 Boulevard South Suite 102 Huntsville, AL 35802

System Overview:

This system is a paper-based, end-to-end Election Management System (EMS) that supports a jurisdiction's election needs by creating and maintaining a central election database, formatting and printing ballots, programming election equipment and the collection and reporting of election results.

This voting system was field tested at Ball State University on August 10, 2018 by the VSTOP team. VSTOP conducted demonstration tests on hardware, firmware and software components. The test also included verification of all required elements of the Indiana statutes regarding voting systems as well as an ADA compliance demonstration. Mock elections, including the IED approved test case scenarios for straight party voting, were conducted on the voting system.

During the field test VSTOP faced an issue related to the slow responsiveness of the AutoMARK touchscreen interface. VSTOP discussed this issue with Mr. Mark Manganaro of ES&S during the test and then again on the morning of August 21st via phone [Attachment 3]. VSTOP also contacted EAC and Pro V&V to investigate this

issue further [Attachment 4]. After reviewing the responses from EAC, Pro V&V and ES&S, VSTOP notes that VVSG covers tests related to touchscreen accuracy and responsiveness and that the AutoMARKs (all versions included in this recommendation) have been shown to comply with VVSG 2005 standards. VSTOP accepts ES&S's explanation that the issues faced were due to the age of the AutoMARK units used in the field test [Attachment 3]. However, VSTOP recommends the equipment provided by ES&S in future field tests reflect the quality of equipment used in practice.

VSTOP also reviewed the VSTL test reports submitted by ES&S. This system was certified by the U.S. Election Assistance Commission on June 5, 2018 and is compliant with the Voluntary Voting System Guidelines (VVSG 1.0 (2005)) [Attachment 5].

Scope of Certification (a list of all voting system components, with limitations therein):

Hardware
AutoMARK VAT v. A100 v. 1.0, A200 v. 1.1, 1.3, A300 v. 1.3 DS200 v. 1.2.1, 1.2.3, 1.3 DS450 v. 1.0 DS850 v. 1.0 ExpressVote HW 1.0 v. 1.0, ExpressVote HW 2.1 v. 2.1.0.0, 2.1.2.0
Firmware
AutoMARK VAT v. 1.8.6.1 DS200 v. 2.12.2.0 DS450 v. 3.0.0.0 DS850 v. 2.10.2.0 ExpressVote HW 1.0 v. 1.4.1.7 ExpressVote HW 2.1 v. 2.4.2.0
Software
ElectionWare v. 4.7.1.4 Election Reporting Manager v. 8.12.1.1 Removeable Media Service v. 1.4.5.0 ES&S Event Log v. 1.5.5.0 AutoMARK VAT Previewer v. 1.8.6.1 ExpressVote Previewer 1.0 v.1.4.1.7 ExpressVote Previewer 2.1 v. 2.4.2.0
Ballot Boxes, Booths and Carts
DS200 Ballot Box (Plastic) v. 1.2, 1.3, 1.4, 1.5 DS200 Ballot Box v. 1.0, 1.1, 1.2 DS200 Ballot Box (Collapsible) 98-00009 DS200 Tote Bin 00074 ExpressVote Rolling Kiosk 98-00049 DS450 Cart 3002 DS850 Cart 6823

Commercial Off the Shelf (COTS)
Cerberus FTP Server v. 9.0.3.1 Enterprise (x64) Micro Focus RM/Cobol Runtime v. 12.06 Adobe Acrobat Standard v. 11 Symantec Endpoint Protection v. 14.0.1_MP1 Symantec Endpoint Protection Intelligent Updater v. 20180227-001-core3sdsv5i64.exe Symantec Endpoint Protection Intelligent Updater v. 20180226-040-IPS_IU_SEP_14RU1.exe Symantec Endpoint Protection Intelligent Updater v. 20180225-001-SONAR_IU_SEP.exe Microsoft Updates (WSUS Offline Utility) v. 11.1.1 Microsoft Windows 7 Professional SP1 (64 bit) Microsoft Server 2008 R2 w/ SP1 DS450 UPS APC Back UPS Pro 1500 DS450 and 850 Surge Protection Tripp Lite Spike Cube DS850 UPS APC Back UPS RS 1500 or APC Back UPS Pro 1500 DS450 and DS850 Audit Printer Oki Microcline 420 DS850 Report Printer Oki B431dn or Oki B431d DS450 Report Printer Dell S2810dn Delkin CF Card Reader/Writer 6381 SanDisk CF Card Reader 018-6305 SanDisk Compact Flash 512MB, 1GB, 2GB Delkin Compact Flash 1GB Delkin USB Flash Drives 512MB, 1GB, 2GB, 4GB, 8GB Delkin Validation USB Flash Drive 16GB Headphones Avid 86002 Zebra QR code scanner DS457-SR20009 Symbol QR code scanner DS9208
Proprietary Hardening Scripts
Secure Set Up v. 2.0.0.1
EMS Workstation Requirements: (Client or Standalone PC) Dell Optiplex 980 or 5040, Dell Latitude E6410 or equivalent with the following minimum configuration:
Processor - Dual Core (min) RAM – 4GB RAM (min) Hard Disk - 150GB (min) Media Drives – One internal CD\DVD ROM drive, Two USB 2.0 (min) Video Device Resolution – 1280x800 (min) Peripherals – Industry standard Microsoft compatible mouse & keyboard
EMS Server Requirements: Dell PowerEdge T710 or equivalent with the following minimum configuration:
Processor – Quad Core (min) RAM - 4GB RAM (min) Hard Disk – 320GB (min) Media Drives - One internal CD\DVD ROM drive, Two USB 2.0 (min) Video Device Resolution – 1280x800 (min) Peripherals - Industry standard Microsoft compatible mouse & keyboard

Limitations:

- The use of the two scanners (Symbol QR Code Scanner v. DS9208 and Zebra QR Scanner v. DS457-SR20009 (Integrated with ExpressVote Rolling Kiosk)) will be limited to scanning 128c barcodes that contain ballot style information generated by Indiana certified Electronic Poll Books. The use of any other features is prohibited including scanning of QR codes, Ballot Online (BOL) QR codes and ExpressPass. Any functionality related to the prohibited features shall be disabled, if possible.
- The Ballot Online (BOL) application and the Ballot Online (BOL) QR code scanning shall not be used.

Recommendation:

On the basis of VSTOP's review and evaluation, we find that the voting system referenced herein (and with the Scope of Certification as above and with the limitations therein) meets all of the requirements of the Indiana Code for use in the State of Indiana. This finding includes compliance with the legal requirements for voters with disabilities.

Jay Bagga

Dr. Jay Bagga, Co-Director
Date: August 21, 2018

Bryan Byers

Dr. Bryan Byers, Co-Director
Date: August 21, 2018

List of Attachments:

[1] IEC-11 application dated August 13, 2018 (revised version)
[2] VSTL (Pro V&V) Report dated May 30, 2018
[3] ES&S email communication on AutoMARK
[4] VSTOP email communications with EAC and Pro V&V on AutoMARK
[5] EAC Scope of Certification dated June 5, 2018