Minutes
State Election Commission Meeting
April 13, 2020

The State Election Commission meeting was telephonically called to order by Chairman Kent Younce at 12:03 p.m., Central Standard Time, April 13, 2020. The following members and staff were present: Commissioners Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; Coordinator of Elections Mark Goins and Kathy Summers, Elections Specialist.

Others participating telephonically were Ian Piper, David Moreno and John Hastings of Dominion Voting; Alli Fick of Hart InterCivic and Chad Colgan of Harp Enterprises.

Pursuant to TCA § 8-44-108(a)(3), the determination of necessity for conducting the State Election Commission meeting by phone was to make county election commission appointments, and to discuss any other business that may come before the commission.

Commissioner McDonald made a motion to adopt the minutes from December 3, 2020, telephonic meeting, Commissioner Blackburn seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner Wallace made a motion to adopt the minutes from January 13, 2020, meeting, Commissioner McDonald seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner McDonald made a motion to adopt the minutes from February 14, 2020, telephonic meeting, Commissioner Wallace seconded the motion and the minutes were unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Commissioner McDonald made a motion pursuant to T.C.A. § § 2-12-101 and 2-12-106, seconded by Commissioner Wallace and unanimously approved any nomination(s) for county election commission appointments as submitted, and to leave the nomination process open until 4:30 p.m. Central Standard Time, Monday, April 13, 2020. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.) **(See attached county election commission appointments made.)**

Old Business
- **NONE**

New Business

- **Hart InterCivic - Alli Fick, Certification Project Manager**

Alli Fick, Certification Project Manager for Hart InterCivic made the presentation before the commission. **(See attached presentation provided by Hart InterCivic.)**

  - **Verity Voting 2.4 (Modification to Verity 2.3)**

Commissioner Blackburn made a motion to suspend the rules for certification of voting machines due to Covid-19, and to approve Hart InterCivic Verity Voting 2.4, seconded by Commissioner Wallace. The motion to approve Verity Voting 2.4 was unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

  - **De Minimis Change to Verity 2.3**

Commissioner McDonald made a motion to suspend the rules for certification of voting machines due to Covid-19, and to approve the De Minimis changes to Verity 2.3, seconded by Commissioner Barrett. The motion to approve the De Minimis change to Verity Voting 2.3 was unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

- **Dominion – Ian Piper, Director of Certification**
Ian Piper, Director of Certification for Dominion made the presentation before the commission. **(See attached presentation provided by Dominion Voting.)**

  - **Democracy Suite - 5.5B (Modification to Democracy Suite – 5.5)**

Commissioner Barrett made a motion to suspend the rules for certification of voting machines due to Covid-19, and to approve the modification changes of Democracy Suite 5.5 to Democracy Suite 5.5B, seconded by Commissioner McDonald. The motion to approve the Democracy Suite 5.5B was unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

  - **ECO 100630 – Central Scanner – Cannon COTS Scanner**

Commissioner Wallace made a motion to suspend the rules for certification of voting machines due to Covid-19, and to approve the ECO 100630 Central Scanner to the Cannon COTS scanner, seconded by Commissioner Duckett. The motion to approve the central scanner was unanimously approved. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

- **Election of Chairman for the term of May 1, 2020 – April 30, 2021**

A motion was made by Commissioner Wallace and seconded by Commissioner Blackburn to elect Donna Barrett as Chairman of the State Election Commission. The motion was unanimously approved to elect Donna Barrett as Chairman of the State Election Commission. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

- **Election of Secretary for the term of May 1, 2020 – April 30, 2021**

A motion was made by Commissioner Wheeler and seconded by Commissioner Duckett to elect Mike McDonald as Secretary of the State Election Commission. The motion was unanimously approved to elect Mike McDonald as Secretary of the State Election Commission. (Aye votes: Barrett, Blackburn, Duckett, McDonald, Wallace, Wheeler and Younce; No votes: None; Abstention: None.)

Coordinator Update

List of Candidates - Coordinator Goins updated commission members on the list of candidates certified for August 6, 2020, election.

June Seminar – Coordinator Goins informed the commission the annual June seminar will be a series of virtual trainings with the counties.

Commissioner McDonald asked about the states plan for obtaining additional poll officials due to COVID-19. Coordinator Goins informed the commission of recent legislation passed, to allow sixteen (16) year old's and employees of elected official not on the ballot to serve as poll officials.
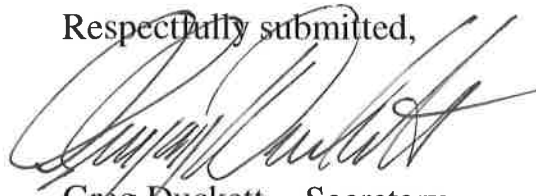
Coordinator Goins updated the commission on the Elections Division's COVID work groups. The working groups are broken down by voting machine and county users. Each group is to come up with a plan of best practices which are vendor specific. Coordinator Goins states the goal is to develop a comprehensive plan for administering an election in extreme circumstances and to know voters can safely cast their votes as well as instill confidence in the integrity of the process.

Chairman Younce asked if any participants would like to speak. A member of the public from Chattanooga would like to see no-excuse absentee by-mail ballot. Coordinator Goins stated to have no-excuse voting would require a change in the law and that may only be done by the General Assembly.

A member of the public inquired about the use of Federal Funds in the upcoming elections. Coordinator Goins stated the funds will used under the Federal Guidelines once received.

The next scheduled meeting is set for July 13, 2020 and will be held in the William R. Snodgrass – Tennessee Tower, Nashville Room - 3rd floor at 12:00 Noon, Central Standard Time.

Respectfully submitted,

Greg Duckett, - Secretary
State Election Commission

State of Tennessee

State Election Commission
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Vacant Status

April 13, 2020

Franklin	R Donna Barrett / D Mike McDonald	
R		
Giles	R Donna Barrett / D Greg Duckett	
R		
Jefferson	R Judy Blackburn / D Tom Wheeler	
R		
Lawrence	R Donna Barrett / D Greg Duckett	
R		
Madison	R Jimmy Wallace / D Greg Duckett	
D		
Overton	R Kent Younce / D Mike McDonald	
R		

Total Vacancies: 6

State of Tennessee

State Election Commission
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

New Appointment Status

April 13, 2020

		Appointment
Jefferson	R Judy Blackburn / D Tom Wheeler	
	R Paula Rugel Gibson	4/13/2020
Madison	R Jimmy Wallace / D Greg Duckett	
	D Lovette Brooks	4/13/2020
Overton	R Kent Younce / D Mike McDonald	
	R Kelly Hull	4/13/2020

Total New Commissioners: 3

Tennessee Secretary of State
Tre Hargett

Elections Division
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Mark Goins
Coordinator of Elections

615-741-7956
Mark.Goins@tn.gov

April 13, 2020

Mr. Robert Greene, Assistant Director
Office of the Secretary of State – Publications Division
312 Rosa L. Parks Avenue
Nashville, TN 37274

Dear Mr. Greene,

The State Election Commission met by teleconference at 12:00 NOON, CST on Monday, April 13, 2020, in the Election Division of the William R. Snodgrass - Tennessee Tower. The notice requirements of TCA § 8-44-108 (b) were fully complied with. A quorum of the Board was not physically present at the location from which the teleconference originated, although a quorum did participate electronically.

In accordance with TCA § 8-44-108 this constitutes the Board's notice of the occurrence of this meeting and the Statement of Necessity.

A telephonic meeting of the Board was required to make county election commission appointments, and to conduct any other business that may come before the commission at that time.

A Statement of Necessity to that effect was formally adopted by the Board at the beginning of the teleconference, and the Statement of Necessity was included in the Board's minutes.

Sincerely,

Mark Goins
Coordinator of Elections

Enclosure(s): Meeting Notice and Call Instructions

PROCEDURES FOR CERTIFYING VOTING MACHINES
BY THE TENNESSEE STATE ELECTION COMMISSION

All voting machines/vendors must receive certification from the state election commission and the coordinator of elections before any voting machines or systems may be sold in the State of Tennessee.

First Step:

Any interested vendor should submit a written request to the coordinator of elections and the state election commission requesting certification of your company together with the EAC certification number, a financial report and a list of all states that have already bought your voting machines or systems. If you would like to demonstrate your product at a meeting of the state election commission, please make that request in your letter. You will be notified of the date, time, and place of the meeting where you may make your presentation.

Second Step:

A. Voting Machine Procedure

Following verification of EAC certification and an initial presentation of your product and/or services, you would need to arrange for at least two (2) State Election Commissioners (of opposite parties) and the coordinator of elections (or designee) to view your machines or system in use in an election of a substantial size in another state. An election of a substantial size involves at the minimum the following characteristics:

- The jurisdiction has a population of at least 10,000 persons;
- The jurisdiction has at least two (2) or more district races on the ballots; and
- There are at least two (2) contested races involving both at large and district races on the ballot.

B. Voting Machine Software or Hardware Upgrade

- EAC Certification;
- Presentation of upgrade before State Election Commission at a meeting; and
- Viewing of upgrade in another state (In lieu of viewing machine in another state, at the discretion of the State Election Commission, letters of recommendation from users in other jurisdiction may be used as support for approval.)

C. De Minimis Voting System Changes

- Any De Minimis change to an EAC certified voting system shall be submitted to the state election commission and coordinator of elections to be approved. For purposes of approval of the de minimis change to the voting system, all that will be required is a letter from the EAC stating the change is de minimis, unless further information is requested by the state election commission or coordinator of elections.

Third Step:

The State Election Commission must vote to certify the machine in order for the machines to be used in an election in Tennessee.

You may send any correspondence for both the state election commission and the coordinator of elections to the following address:

> 312 Rosa L.Parks Avenue, 7th Floor
> William R. Snodgrass Tower
> Nashville, Tennessee 37243
> (615) 741-7956

If you have any further questions regarding certification of your company, please feel free to contact the office of the state election coordinator at the phone number listed above.

Tennessee Secretary of State
Tre Hargett

Elections Division
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Mark Goins
Coordinator of Elections

615-741-7956
Mark.Goins@tn.gov

April 15, 2020

Alli Fick
Certification Project Manager, Hart InterCivic
15500 Wells Port Drive
Austin, TX 78728

Dear Ms. Fick,

On April 13, 2020, you telephonically presented to the State Election Commission (SEC) the De Minimis changes to Hart Verity 2.3 and Verity 2.4 systems modifications.

This letter is to inform you the SEC and I certified the Hart Verity 2.3 De Minimis changes and Verity 2.4 systems modification. The State Election Commission suspended their rules due to Covid-19 and approved the use of Verity 2.4 voting system bearing the EAC Certification Number: HRT-Verity-2.4.

Thank you for your cooperation in the certification process.

Sincerely,

Mark Goins
Coordinator of Elections

c/cc: Chad Colgan, Harp - Territory Manager
Enclosure: EAC Certification Number HRT-Verity-2.4

United States Election Assistance Commission

Certificate of Conformance

Hart Verity Voting 2.4

VVSG 2005 VER. I

EAC CERTIFIED

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name:	Verity Voting
Model or Version:	2.4
Name of VSTL:	SLI Compliance
EAC Certification Number:	HRT-VERITY-2.4
Date Issued:	February 21, 2020

Mona Harrington
Acting Executive Director

Scope of Certification Attached

HART *intercivic™*

February 26, 2020

Mr. Mark Goins, Coordinator
Division of Elections
312 Rosa L. Parks Avenue
7th Floor, William R. Snodgrass Tower
Nashville, TN 37243

Via: Electronic Mail

RE: Application for Certification of Verity Voting 2.4

Dear Mr. Goins,

Hart InterCivic, Inc. is seeking certification of Verity Voting 2.4 in the State of Tennessee. Verity Voting 2.4 is certified by the EAC as conformant with the federal *Voluntary Voting System Guidelines (VVSG),* Version 1.0 (2005). We would also like the opportunity to present Verity Voting 2.4 at the April 13th, 2020 State Election Commission meeting.

Verity Voting 2.4 includes the following components:
- Verity Election Management – Election management software application
- Verity User Management – User management software application
- Verity Desktop – Secure desktop management application
- Verity Data – Data management software application
- Verity Build – Election definition software application
- Verity Central – Central scanning software application
- Verity Count – Tabulation and reporting software application
- Verity Scan – Digital scanning voting device
- Verity Print – Pre-voting ballot production device
- Verity Controller – Polling place management device for use with Verity Touch and Verity Touch Writer Duo
- Verity Touch – Direct Recording Electronic (DRE) device
- Verity Touch Writer Duo – Ballot marking device with integrated COTS printer
- Verity Touch Writer with Access – Ballot marking device, with audio tactile interface and attached COTS printer

Testing and Deployment Status:
- Verity Voting 2.4 was certified to the 2005 *Voluntary Voting System Guidelines* by the Election Assistance Commission on February 26, 2020. The Certificate of Conformance and Scope of Certification are included with this application.
- Verity Voting 2.4 was tested by SLI Compliance (Wheat Ridge, Colorado) and its compliance with VVSG 2005 standards has been documented in a test report.

- Verity Voting 2.4 is currently in the certification process in the State of Michigan and the State of Texas.

Overview of the Verity Voting system

The Verity Voting system includes software, hardware, devices, and peripheral components that allow election professionals to accomplish the following high-level tasks:
- Election definition
- Ballot production
- Flash media production
- Voting machine configuration and use
- Central scanning and adjudication of ballots
- Counting of votes
- Consolidation and reporting of results and audit logs

Identification of the Verity Voting system
Software Applications

- **Verity Data** is a component of the Verity Voting system used by officials to enter election data for contests, candidates, proposition text, translations, and audio. Data also provides the user with controls for proofing of data and layout and performs validation prior to locking the data to ensure its readiness for use in Verity Build.

- **Verity Build** enables election officials to define ballot styles and generate election definitions. In addition to producing paper and electronic ballot styles, Build allows users to program voting device behavior in a variety of ways. After ballot generation, Build electronically writes the election data file (including all ballot styles) to portable flash media known as vDrives, which can then be deployed for a variety of different voting types, such as central scanning with Verity Central or in-person voting with Verity Scan, Verity Touch, Verity Touch Writer, and Verity Touch Writer Duo. After generating election definitions, Verity Build can also print ballots or output them electronically for third-party printers.

- **Verity Central** enables election officials to scan paper ballots at a central location using a commercial-off-the-shelf (COTS) scanner, adjudicate voter selection marks as necessary, and convert voter selection marks to electronic Cast Vote Records (CVRs). Central is especially well-suited for scanning and adjudicating by-mail ballots. When all ballots have been scanned and adjudicated, Central writes Cast Vote Records to vDrive portable flash media, which can be tabulated in Verity Count tabulation software. It is important to note that Central does not tabulate votes; because it simply scans and records Cast Vote Records, this allows jurisdictions to begin scanning before the close of polls, thereby greatly accelerating the scanning workflow. While Central does produce a variety of reports, because it does not tabulate, it does not produce reports containing results totals.

- **Verity Count** allows election officials to tabulate and report the results of Cast Vote Records stored on vDrives. vDrives inserted into the tabulation workstation can contain by-mail votes from Central, or in-person votes from Scan or Controller devices. Once the CVRs have been read and tabulated, Count can produce a variety of standard and customized reports. Count also allows officials to

adjudicate write-in votes from Scan, Controller, or Central. Finally, Count also collects and stores audit logs from Verity voting devices, allowing for post-election audit and/or analysis.

- **Verity User Management** enables users with administrative permissions to create and manage user accounts within the Verity Voting system. Depending on the component for which the accounts are created, permissions may be managed by various roles. Depending on the role, each user has access to different features of the Verity software applications and other components.

- **Verity Election Management** enables users with administrative permissions to add, copy, delete, import, export, archive, restore, and manage elections in the Verity system.

- **Verity Desktop** allows authorized users to set the system date and time, export Verity application file hashes to removable USB media for software validation and import printer configuration files.

Voting Devices and Peripheral Equipment

- **Verity Print** is a pre-voting ballot production device for use by election officials and/or poll workers. Verity Print produces unmarked paper ballots. Print is paired with a commercial off-the-shelf printer to allow the user to select and print the desired ballot style based on the precinct and voter registration information. The Verity Print device is activated so the election official can print one or more blank ballots from one selected precinct at a time. Ballots can be printed on-demand for immediate use, or they can be printed in advance for additional inventory.

- **Verity Scan** is a digital scanner for paper ballots. Scan is paired with a purpose-built ballot box to ensure accurate, secure, and private ballot scanning and vote casting for each voter. Poll workers perform a minimal number of steps to open the polls and activate the Verity Scan device so that it can receive paper ballots. Once the polls are open, to vote, voters insert their ballots when Scan indicates it is appropriate, and then voters wait for Scan to indicate that the ballot has been successfully cast. Scan also supports "second chance" voting for mismarked ballots. During the election definition process in Verity Build, election officials may specify the types of mismarks for which Verity Scan should reject ballots and present voter instruction messages for "second chance voting;" officials can choose to flag undervotes, overvotes, and blank ballots, and they can also specify whether voters are required to have poll worker assistance to cast a mismarked ballot. After scanning, each ballot's Cast Vote Record is stored on vDrive portable flash media, which can be tabulated by the Verity Count software application.

- **Verity Controller** is a polling place management device that is used to generate random Access Codes for voters. Access Codes are used to activate a ballot session on Verity Touch and Verity Touch Writer Duo. Up to twelve Touch or Touch Writer Duo devices can be connected to a single Verity Controller via a daisy-chain network.

- **Verity Touch Writer and Touch Writer Duo** are ballot marking devices for paper ballots. Voters use the electronic interface to privately and independently make their selections on the ballot. Voters can also make selections with Verity Access, an Audio-Tactile interface (ATI) component with three tactile buttons, one audio port (for headphones), and one port for external two-switch devices. When voters finish making their selections, they print the marked ballot.

Verity Touch Writer is configured as a standalone device with a separate COTS printer, and Verity Touch Writer Duo, which has an integrated printer, is configured for use in a daisy-chained network with Verity Controller. Using Verity Touch Writer or Touch Writer Duo in conjunction with Verity Scan provides the voter with a reviewable paper ballot that is accurately captured through reviewing, scanning, and acceptance for tabulation as a voter's cast vote record (CVR). As ballot marking devices, the Verity Touch Writer and Touch Writer Duo do not record electronic cast vote records.

- **Verity Touch** is a Direct Recording Electronic (DRE) device. After polls have been opened, poll worker(s) use the Controller to create anonymous voter Access Codes that are associated with various ballot styles. Access Codes are used by voters to activate their ballot session and cast a vote in private. After the voter privately and independently marks and reviews the ballot, he or she will electronically cast the ballot. The poll worker uses the Controller to manage any combination of Touch devices, up to a total of 12, that are connected via a daisy-chain network.

- **Verity Access** is an audio tactile interface (ATI) controller that is connected to Verity Touch Writer ballot marking devices as a complement to the touchscreen display, to provide additional options for accessible voting. Access has three tactile buttons, one audio port, one port for two-switch adaptive devices (such as "jelly switches" or sip-and-puff devices), and a custom USB cable. Jacks for headphones and adaptive devices are located on the top edge of the device, and the device has gripping surfaces on either side.

- **Ballot Box.** Designed to work seamlessly with the Scan device, the Verity Ballot Box is designed for security, light weight, and ease of deployment. Using an innovative folding design, the durable ballot box includes separate secure compartments for scanned and un-scanned ballots, and it folds to just 5" thin, for easy transportation and storage.

- **Voting Booth.** Like the Ballot Box, the specially designed voting booth for Touch Writer and Touch is designed for light weight and easy set up. The booth includes only three parts to assemble, and it also includes durable nylon privacy screens. ADA-compliant versions of the Verity Voting Booth are also designed to comply with VVSG requirements for accessibility and controls within reach.

- **Verity vDrive.** vDrives are flash memory media devices that carry the election definition from Verity to Verity devices, including Scan, Touch Writer, and Controller. vDrives also store Cast Vote Records (CVRs) and audit information. After polls are closed, vDrives can be removed from Controller, Scan or Touch Writer to transfer CVRs and/or audit logs to Count. vDrives are also used to store CVRs associated with scanned ballots in Central. vDrives from Controller, Scan and Central are read into Count, which tabulates votes and reports results.

- **Verity Key** is a two-factor authentication device used to secure access to critical functions throughout the election. Two-factor authentication means that users must have the physical Key device, which is similar to a USB token, as well as knowing the passcode associated with the physical security device. This electronic device is required for access to secure functions in the Build, Central, and Count applications, including tasks such as accepting ballot styles, opening new election functions, and tabulating votes.
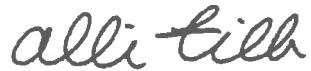
Additional Materials

Hart has included the following items with this application submission:

- Certificate of Conformance and Scope of Certification Document from the U.S. Election Assistance Commission

I look forward to your favorable review of this application and the opportunity to present Verity Voting 2.4 to the State Election Commission at its April 13th meeting. For questions or additional information, please feel free to contact me.

Respectfully submitted,

Alli Fick
Certification Project Manager
Hart InterCivic
(561) 628-9273
afick@hartic.com

United States Election Assistance Commission

Certificate of Conformance

Hart Verity Voting 2.4

VVSG 2005 VER. I

EAC

CERTIFIED

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)* . Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: Verity Voting

Model or Version: 2.4

Name of VSTL: SLI Compliance

EAC Certification Number: HRT-VERITY-2.4

Date Issued: February 21, 2020

Mona Harrington

Acting Executive Director

Scope of Certification Attached

Manufacturer: *Hart InterCivic*
System Name: *Verity Voting 2.4*
Certificate: *HRT-Verity-2.4*

Laboratory: *SLI Compliance*
Standard: *2005 VVSG*
Date: *2/21/2020*

Scope of Certification

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

System Overview:

The **Hart Verity Voting 2.4** voting system represents a set of software applications for pre-voting, voting and post-voting election project activities for jurisdictions of various sizes and political division complexities. **Verity Voting 2. 4** functions include:

- Defining the political divisions of the jurisdiction and organizing the election with its hierarchical structure, attributes and associations.
- Defining the election events with their attributes such as the election name, date and type, as well as contests, candidates, referendum questions, voting locations and their attributes.
- Preparing and producing ballots for polling place and absentee voting or by mail voting.
- Preparing media for precinct voting devices and central count devices.

- Configuring and programming the **Verity Scan** digital scanners for marked paper ballots and **Verity Touch Writer** printed vote records.
- Configuring and programming the **Verity Touch Writer** BMD devices.
- Configuring and programming the **Verity Controller** with **Verity Touch Writer Duo** BMD devices.
- Configuring and programming the **Verity Controller** with **Verity Touch** and **Verity Touch with Access** DRE devices.
- Configuring and programming the **Verity Print** on-demand ballot production device.
- Transmission of the election results via **Verity Relay**.
- Producing the election definition and auditing reports.
- Providing administrative management functions for user, database, networking and system management.
- Import of the Cast Vote Records from **Verity Scan** devices and **Verity Central**.
- Preview and validation of the election results.
- Producing election results tally according to voting variations and election system rules.
- Producing a variety of reports of the election results in the desired format.
- Publishing of the official election results. Auditing of election results including ballot images and log files.

Verity Scan is a digital scanning device (tabulator) that is used in conjunction with an external ballot box. The unit is designed to scan marked paper ballots or Verity Touch Writer Duo printed vote records, interpret and record voter marks on the marked paper ballot or record voter selections on the printed vote records, and deposit into the secure ballot box.

Verity Touch Writer is a standalone Ballot Marking Device (BMD) which also includes an Audio Tactile Interface (ATI). Touch Writer allows voters who cannot hand-mark a paper ballot to generate a machine-readable and human readable paper ballot, based on vote selections made through the accessible electronic interface.

The **Verity Touch Writer Duo** is a daisy chained configuration of a **Verity Controller** device configured with up to twelve **Verity Touch Writer Duo** BMD devices, which allows voters to utilize the touchscreen or optional Audio Tactile Interface to generate a machine-readable and human readable printed vote record, based on vote selections made.

The **Verity Touch** is a Direct Recording Electronic (DRE) device chained configuration of a **Verity Controller** device configured with up to twelve **Verity Touch or Touch with Access** devices, which allow voters to cast their vote electronically via a touchscreen.

The **Verity Touch with Access** is a DRE device chained configuration of a **Verity Controller** device configured with up to twelve **Verity Touch** or **Touch with Access** devices, which allow voters to cast their vote electronically via a touchscreen or Audio Tactile Interface (ATI).

Verity Print is an on-demand ballot production device for unmarked paper ballots.

Verity Election Management allows users with the Administrator role to import and manage election definitions. Imported election definitions are available through the Elections chevron in Build. Users can also delete, archive, and manage the election definitions.

Verity User Management enables users with the correct role and permissions to create and manage user accounts within the **Verity Voting** system for the local workstation in a standalone configuration, or for the network in a networked configuration.

Verity Desktop enables users, with the correct roles, to set the workstations' date and time, gather **Verity** application hash codes (in order to validate the correctness of the installed applications), and access to the Windows desktop.

Verity Data provides the user with controls for entering and proofing data and audio. **Verity Data** also performs validation on the exported information to ensure that it is ready for use in **Verity Build**.

Verity Build opens the election to proof data, view reports, and print ballots, and allows for configuring and programming the **Verity Scan** digital scanners, **Verity Touch Writer** BMD, **Verity Controller/Touch Writer Duo** BMD devices, **Verity Print**, and **Verity Controller/Touch** series DRE devices, as well as producing the election definition and auditing reports.

Verity Central is a high-speed, central digital ballot scanning system used for high-volume processing of ballots (such as vote by mail). Verity Central is based on COTS scanning hardware coupled with custom **Hart**-developed ballot processing application software which resides on an attached workstation.

Verity Count is an application that tabulates election results and generates reports. **Verity Count** can be used to collect and store all election logs from every **Verity** component/device used in the election, allowing for complete election audit log reviews.

Verity Relay provides remote transmission capability to the **Verity Voting 2.4** system. Utilizing an optional modem with **Verity Scan**, at close of polls, results are transmitted from the polling place device to the **Verity Relay** workstation.

Verity AutoBallot is an optional barcode scanner kit for **Verity Controller, Verity Print,** and **Verity Touch Writer** that allows air-gapped integration between an e-pollbook check-in process and the task of selecting the ballot style for the voting system.

Certified System before Modification (If applicable):
Verity Voting 2.3

Anomalies and/or Additions addressed in Verity Voting 2. 4:
The modifications to Verity 2.4 address multiple aspects of the system, including state specific features, new features for all devices and applications, security enhancements, completion of

the "Smart Panel" tablet hardware rollout, corrections to defects, as well as associated documentation updates:

- See Certification Test Report, pages 24-28 for detailed changes.

Mark definition:

System supports marks that cover a minimum of 4% of the rectangular marking area.

Tested Marking Devices:

System supports Black and Blue ballpoint pens; testing was performed with black, blue, dark blue, pink, light green, green, orange, and red pens, as well as #2 pencil lead.

Language capability:

System supports English, Spanish, Chinese, Japanese, Korean, Khmer, Thai, Vietnamese, Tagalog, Ilocano, and Hindi.

Components Included:

This section provides information describing the components and revision level of the primary components included in this Certification.
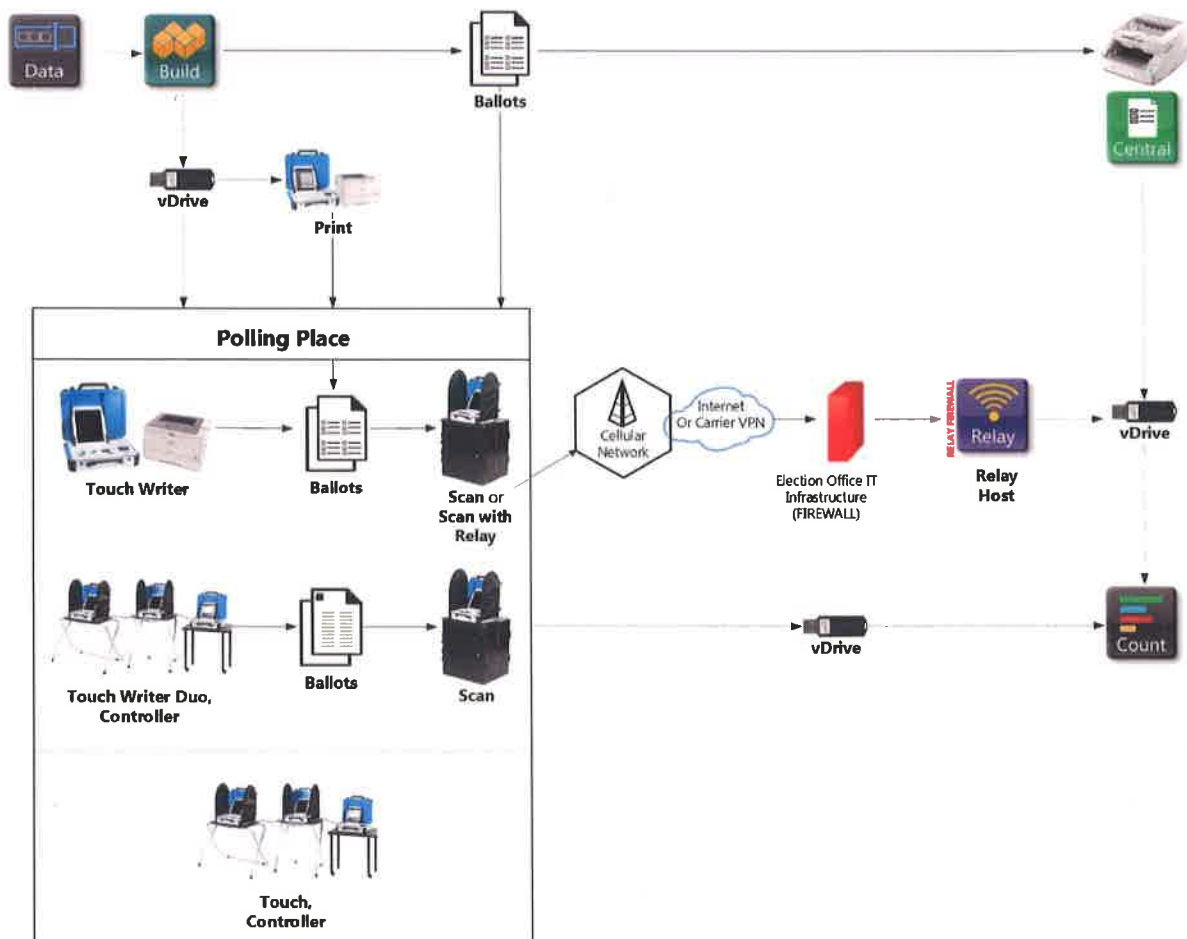
Proprietary Software

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Verity Data	2.4.2			Data management software
Verity Build	2.4.2			Election definition software
Verity Central	2.4.2			High speed digital scanning software
Verity Count	2.4.2			Tabulation and reporting software
Verity Relay	2.4.2			Data transmission software (receiving station)
Verity Print	2.4.2			On-demand ballot printing device firmware
Verity Scan	2.4.2			Digital scanning device firmware
Verity Touch Writer	2.4.2			Ballot marking device
Verity Touch Writer Duo	2.4.2			Ballot marking device, with internal COTS ballot summary printer and optional audio tactile interface
Verity Controller	2.4.2			Polling place management device
Verity Touch/Verity Touch with Access	2.4.2			Direct Recording Electronic (DRE) voting device. Software also supports the Verity Touch with Access devices, an Accessible DRE voting device, with audio tactile interface
Verity Device Microcontroller	V17			Firmware for Verity devices
Verity Touch Writer Duo Microcontroller	V1			Firmware for Verity Touch Writer Duo

COTS Software and Firmware

Description	Version
Verity Data, Build, Central, Count, Relay, Print, Scan – Paper Ballot Scanner (additional item below), Touch Writer – Electronic BMD Device, Touch Writer Duo – Electronic BMD Device, Controller, Touch – Electronic DRE Device, Touch with Access – Electronic DRE Device	
Microsoft Windows Embedded Standard 7, Service Pack 1	6.1.7601
Microsoft SQL Server 2012 for Embedded Systems License	11.00.2100
McAfee Application Control for Devices (McAfee Solidifier)	8.21.1-143
Verity Scan – Paper Ballot Scanner	
Nuance Western OCR, Desktop, OEM	V20

Hardware

Description	Version
Verity Print – Ballot Printer	3005356 Rev E
Verity Print – Ballot Printer	3005856 Rev B
Verity Scan – Paper Ballot Scanner	3005350 Rev I
Verity Scan – Paper Ballot Scanner	3005800 Rev B

Description	Version
Verity Touch Writer – Electronic BMD Device	3005352 Rev H
Verity Touch Writer – Electronic BMD Device	3005852 Rev B
Verity Touch Writer Duo – Electronic BMD Device	3005700 Rev B
Verity Controller – Networked Centralized Management Device	3005351 Rev E
Verity Controller – Networked Centralized Management Device	3005825 Rev B
Verity Touch – Electronic DRE Device	3005355 Rev E
Verity Touch – Electronic DRE Device	3005854 Rev B
Verity Touch with Access – Electronic DRE Device	3005353 Rev F
Verity Touch with Access – Electronic DRE Device	3005853 Rev B

COTS Equipment

Description	Version
Verity Data, Build	
Verity Data and Build Applications and Workstation Kit • HP Z240 Workstation • HPZ230 Workstation supported for existing customers only • Verity Data Software • Verity Build Software	C
OKI Data C831dn Color Printer for existing customers only	N35100A
OKI Data C844dn Color Printer	N35301A
OKI Data C911dn color Printer for existing customers only	N36100A
OKI Data C931e Color Printer	N36100A
OKI Data B432dn Mono Report and Ballot Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
8-port Ethernet Switch	1405-8GV3
Vinpower Digital USB Duplicator 7-targets	USBShark-7T-BK
Vinpower Digital USB Duplicator 23-targets	USBShark-23T-BK
Verity Central	
Verity Central Applications and Workstation Kit • HP Z240 Workstation • HP Z230 Workstation supported for existing customers only • Verity Central Software	C
Canon DR-G1100 High-Speed Scanner	M111181
Canon DR-G1130 High-Speed Scanner	M111171
Canon DR-G2110 High-Speed Scanner	6130030
Canon DR-G2140 High-Speed Scanner	6130020
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
8-port Ethernet Switch	1405-8GV3
Verity Count	
Verity Count Applications and Workstation Kit • HP Z240 Workstation or HP Z230 Workstation • HP Z230 Workstation supported for existing customers only • Verity Count Software	C
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
8-port Ethernet Switch	1405-8GV3
Verity Relay	
Verity Relay Applications and Workstation Kit • HP Z240 Workstation	A

• Verity Relay Software	
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Description	**Version**
8-port Ethernet Switch	1405-8GV3
Verity Print	
OKI Data C831dn Color Printer for existing customers only	N35100A
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data C844dn Color Printer	N35301A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Optional AutoBallot Barcode Scanner Kit – Includes 2d barcode scanner: • Hart part number: 1003672 • Motorola/Zebra part number: DS4308	B
Verity Scan – Paper Ballot Scanner	
Verity Ballot Box	B
Optional Relay Accessory Kit (4G LTE Cat-M1)	A
Optional Relay Accessory Kit (Aeris, EV-DO) for existing customers only	A
Optional Relay Accessory Kit (HSDPA+, Global) for existing customers only	A
Verity Touch Writer – Electronic BMD Device	
OKI Data B432dn Mono Printer Report Printer	N22500A
OKI Data B431d Mono Report Printer for existing customers only	N22202A
Accessible Voting Booth	D
Optional AutoBallot Barcode Scanner Kit – Includes 2d barcode scanner: • Hart part number: 1003672 Motorola/Zebra part number: DS4308	B
Headphones • Brand: V7, part number HA300-2NP	2005230
Verity Touch Writer Duo – Electronic BMD Device	
Brother PJ700 Series Thermal Printer	PJ723
Accessible Voting Booth with ATI Tray	D
Standard Voting Booth	D
Optional Detachable ATI Kit	A
Optional Headphones for ATI Kit Brand: V7, part number HA300-2NP	2005230
Verity Controller	
Optional AutoBallot Barcode Scanner Kit – Includes 2d barcode scanner: • Hart part number: 1003672 Motorola/Zebra part number: DS4308	B
Verity Touch – Electronic DRE Device	
Standard Voting Booth	D
Verity Touch with Access – Electronic DRE Device	
Accessible Voting Booth	D
Headphones Brand: V7, part number HA300-2NP	2005230

System Limitations

This table depicts the limits the system has been tested and certified to meet.

Element	Testing Limit/Requirement Z240 64GB Systems (does not include Data/Build/Count combined system)	Testing Limit/Requirement Z230 32GB Systems (includes Z240 64GB Data/Build/Count combined system)
Precincts	3,000	2,000
Splits per Precinct	20	20
Total Precincts + Splits in an election	3,000	2,000
Districts for voting devices and applications	400	75
Parties in a General Election	24	24
Parties in a Primary Election	10	10
Contests in an election	2,000	200
Choices in a single contest	300	75
Total contest choices (voting positions) in an election	5,000	600
Max length of choice name	100 characters	100 characters
Max write-in length	25 characters	25 characters
Voting Types	5	5
Max polling places per election	3,050	1,200
Max devices per election	N/A	N/A
vDrive capacity – Scan voting device	9,999 sheets per vDrive	9,999 sheets per vDrive
vDrive capacity – Verity Central	80,000 sheets per vDrive	80,000 sheets per vDrive
Number of voters definable per election	2,500,000	1,000,000
Number of total ballots cast per election	1,750,000	1,000,000
Max number of sheets per ballot	4 sheets	4 sheets
Max number of sheets – Verity Scan	9,999	9,999
Max number of CVRs – Verity County	7,000,000	7,000,000
Ballot Sizes	8.5"x11", 8.5"x14", 8.5"x17", 8.5"x20", 11"x17" (Central only)	8.5"x11", 8.5"x14", 8.5"x17", 8.5"x20", 11"x17" (Central only)
Number of languages in a single election (including English)	11	11

Functionality

2005 VVSG Supported Functionality Declaration

Feature/Characteristic	Yes/No	Comment
Voter Verified Paper Audit Trails		
VVPAT	No	
Accessibility		
Forward Approach	Yes	
Parallel (Side) Approach	Yes	
Closed Primary		

Feature/Characteristic	Yes/No	Comment
Primary: Closed	Yes	Supports standard closed primary and modified closed primary
Open Primary		
Primary: Open Standard (provide definition of how supported)	Yes	Open Primary
Primary: Open Blanket (provide definition of how supported)	Yes	General "top two"
Partisan & Non-Partisan:		
Partisan & Non-Partisan: Vote for 1 of N race	Yes	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	Yes	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and write-in voting	Yes	
Partisan & Non-Partisan "vote for 1" race with no declared candidates and write-in voting	Yes	
Write-In Voting:		
Write-in Voting: System default is a voting position identified for write-ins.	No	By default, the number of write-ins available in a contest is zero, users may increment as necessary
Write-in Voting: Without selecting a write in position.	No	
Write-in: With No Declared Candidates	Yes	
Write-in: Identification of write-ins for resolution at central count	Yes	
Primary Presidential Delegation Nominations & Slates:		
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party	Yes	
Slate & Group Voting: one selection votes the slate.	Yes	
Ballot Rotation:		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	Yes	Rotation by precinct and precinct split
Straight Party Voting:		
Straight Party: A single selection for partisan races in a general election	Yes	
Straight Party: Vote for each candidate individually	Yes	
Straight Party: Modify straight party selections with crossover votes	Yes	
Straight Party: A race without a candidate for one party	Yes	
Straight Party: "N of M race (where "N">1)	Yes	
Straight Party: Excludes a partisan contest from the straight party selection	Yes	
Cross-Party Endorsement:		
Cross party endorsements, multiple parties endorse one candidate.	Yes	
Split Precincts:		
Split Precincts: Multiple ballot styles	Yes	
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	Yes	
Split Precincts: DRE matches voter to all applicable races.	Yes	

Feature/Characteristic	Yes/No	Comment
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	Yes	
Vote N of M:		
Vote for N of M: Counts each selected candidate, if the maximum is not exceeded.	Yes	
Vote for N of M: Invalidates all candidates in an overvote (paper)	Yes	
Recall Issues, with options:		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote Yes or No Question)	Yes	
Recall Issues with Options: Retain is the first option, Replacement candidate for the second or more options (Vote 1 of M)	Yes	
Recall Issues with Options: Two contests with access to a second contest conditional upon a specific vote in contest one. (Must vote Yes to vote in 2nd contest.)	Yes	
Recall Issues with Options: Two contests with access to a second contest conditional upon any vote in contest one. (Must vote Yes to vote in 2nd contest.)	Yes	
Cumulative Voting		
Cumulative Voting: Voters are permitted to cast, as many votes as there are seats to be filled for one or more candidates. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidate.	Yes	
Ranked Order Voting		
Ranked Order Voting: Voters can write in a ranked vote.	Yes	
Ranked Order Voting: A ballot stops being counting when all ranked choices have been eliminated	N/A	Tabulation rules are unique per jurisdiction
Ranked Order Voting: A ballot with a skipped rank counts the vote for the next rank.	N/A	Tabulation rules are unique per jurisdiction
Ranked Order Voting: Voters rank candidates in a contest in order of choice. A candidate receiving a majority of the first choice votes wins. If no candidate receives a majority of first choice votes, the last place candidate is deleted, each ballot cast for the deleted candidate counts for the second choice candidate listed on the ballot. The process of eliminating the last place candidate and recounting the ballots continues until one candidate receives a majority of the vote	N/A	Tabulation rules are unique per jurisdiction
Ranked Order Voting: A ballot with two choices ranked the same, stops being counted at the point of two similarly ranked choices.	Yes	
Ranked Order Voting: The total number of votes for two or more candidates with the least votes is less than the votes of the candidate with the next highest number of votes, the candidates with the least votes are eliminated simultaneously and their votes transferred to the next-ranked continuing candidate.	N/A	Tabulation rules are unique per jurisdiction
Provisional or Challenged Ballots		
Provisional/Challenged Ballots: A voted provisional ballots is identified but not included in the tabulation, but can be added in the central count.	Yes	

Feature/Characteristic	Yes/No	Comment
Provisional/Challenged Ballots: A voted provisional ballots is included in the tabulation, but is identified and can be subtracted in the central count	Yes	
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of the ballot.	Yes	
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	Yes	If the system detects more than the valid number of marks in a contest, it is counted as an overvote
Overvotes: DRE: Prevented from or requires correction of overvoting.	Yes	
Overvotes: If a system does not prevent overvotes, it must count them. Define how overvotes are counted.	Yes	If the system detects more than the valid number of marks in a contest, it is counted as an overvote
Overvotes: DRE systems that provide a method to data enter absentee votes must account for overvotes.	Yes	
Undervotes		
Undervotes: System counts undervotes cast for accounting purposes	Yes	
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	Yes	
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	Yes	
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	Yes	
Networking		
Wide Area Network – Use of Modems	Yes	With optional Verity Relay
Wide Area Network – Use of Wireless	Yes	With optional Verity Relay
Local Area Network – Use of TCP/IP	Yes	
Local Area Network – Use of Infrared	No	
Local Area Network – Use of Wireless	No	
FIPS 140-2 validated cryptographic module	Yes	
Used as (if applicable):		
Precinct counting device	Yes	
Central counting device	Yes	

Baseline Certification Engineering Change Orders (ECO)

This table depicts the ECOs certified with the voting system. This includes ECOs approved and incorporated following the certification of the certified system before modification, Verity Voting 2.3.

Change ID	Date	Component	Description
ECO-01325	04/15/2019	Verity Scan	Existing cellular USB dongles are end-of-life and replaced with the MTD-MNA1 model.
ECO-01326	06/20/2019	Verity Touch Writer, Verity Touch, Verity Touch with Access, Verity Controller, Verity Touch Writer Duo, Verity Scan, and Verity Print	Clerical corrections and manufacturing improvements.
ECO-01330	04/11/2019	Verity Touch Writer Duo, Verity Scan, and Verity Controller	Verity EAC logo and preventative maintenance label updates.
ECO-01351	08/20/2019	Verity Touch Writer, Verity Touch, Verity Touch with Access, Verity Controller, Verity Touch Writer Duo, Verity Scan, and Verity Print	Reduce size of the Verity device shipping box.

HART *intercivic*

March 9, 2020

Mr. Mark Goins
Division of Elections
312 Rosa L. Parks Avenue
7th Floor, Snodgrass Tower
Nashville, TN 37243-0309

Via: Electronic Mail

RE: De Minimis Change to Verity Voting – AutoBallot Barcode Scanner

Dear Mr. Goins,

Hart InterCivic, Inc. is seeking approval of a de minimis change to Verity Voting that will only affect AutoBallot. The COTS Motorola/Zebra model DS4308 handheld scanner is no longer available, and the Zebra model DS4608 is the manufacturer's suggested direct replacement. This modification, ECO-01387, was approved as a de minimis change by the EAC on March 2, 2020.

Description of Change:
This de minimis change addresses the replacement of the Motorola/Zebra model DS4308 handheld with the Zebra model DS4608.

Additional Documentation:
I have included the following documentation with this request:

- **4005661 Rev A.01 – AutoBallot Barcode Scanner Update.pdf** - Hart's full description of the change, as submitted to the VSTL and EAC.
- **Hart ECO 01387 Approval 3-2-20.pdf** - Correspondence from the EAC approving the change as de minimis.

Hart InterCivic looks forward to your favorable review of this request. For questions or additional information, please contact me at 561.628.9273 (afick@hartic.com).

Respectfully submitted,

Alli Fick

Alli Fick
Certification Project Manager, Hart InterCivic

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⊻ERITY®

ECO-01387 Change Summary
AutoBallot Barcode Scanner DS4308
Replaced with equivalent DS4608

Doc. 4005661

CONFIDENTIAL AND PROPRIETARY

Hart InterCivic		
Document Number:		Revision:
4005661		A.01
Document Name:		
ECO-01387 Change Summary		
Motorola Barcode Scanner DS4308 Replaced by DS4608		
		Page 1 of 6

Change History

Version	Date	Author(s)	Description
A.00	01-13-20	J. Bernal	Initial release.
A.01	01-27-20	J. Bernal	Update section 1 to describe the function of the AutoBallot kit. Update section 3.2 to describe the part number suffix. Update section 4 to describe testing performed.

Owners and List of Contacts

Name	Email	Phone	Role
Jim Canter	jcanter@hartic.com	512.252.6410	Chief Technology Officer
Dan Gately	dgately@hartic.com	512.252.6817	Director, SCM
Jared Bernal	jbernal@hartic.com	512.252.6462	Sr. Regulatory Compliance Engineer
Lynn Simpson	lsimpson@hartic.com	512.252.6637	Sr. Mechanical Engineer

Table of Contents

1   SUMMARY

AutoBallot is an optional barcode scanner kit for Verity Controller, Verity Print and Verity Touch Writer that allows air-gapped integration between an e-pollbook check-in process and the task of selecting the proper ballot style for the voting system.

The COTS (Commercial Off the Shelf) barcode (handheld) scanner that Hart uses with its optional AutoBallot kit, the Zebra DS4308, has reached end-of-life. The DS4308 model is replaced with the Zebra DS4608.

The new DS4608 is a direct replacement for the DS4308 model. The models are functionally identical and have the same regulatory certifications.

2   REASON / JUSTIFICATION FOR CHANGE

The Motorola/Zebra model DS4308 handheld scanner is no longer available. The Zebra model DS4608 is manufacturer's suggested direct replacement.

3   DESCRIPTIONS OF CHANGES

3.1   Change Description

The Motorola DS4308 is resold by Hart as part of the Verity AutoBallot kit. AutoBallot is an optional handheld barcode scanner for use with Verity Controller, Verity Print, and Touch Writer.

This change is applicable to all Verity releases.

The replacement of the DS4308 to the DS4608 will not result in a BOM or assembly drawing change as the replacement model number is identical in form, fit, and function. The approved manufacturer list will be updated to list the existing model number as End of Life and the new model number as preferred. The top level kit will also receive a new revision.

An End of Sale bulletin, where they note that the DS4308 transitions to the DS4608, and dataatasheets for both the handheld barcode scanners are included in the following zip file:

4005661A01_Supporting_Documents.zip

3.2   Approved Manufacturers List Change

The Approved Manufacturers List will be updated to add the new orderable part number for the Zebra DS4608 model as the "preferred" model. The existing Motorola/Zebra DS4308 will remain active on the Approved Manufacturers List but be listed as "Alternate." Zebra Technologies has now completed its acquisition of Motorola Solutions' Enterprise Business, and as such datasheets and other product branding now lists "Zebra Technologies Corp" as the vendor, with all "Motorola" branding removed.

The suffix appended to the model number on the Manufacturer Part Number below identifies the DS4308 as a kit that includes a removable USB cable. The suffix attached to the DS4608 below does not include a USB cable; this reduces waste as the manufacturer supplied USB is replaced in the AutoBallot kit by a mechanically and electrically obfuscated cable for connection to the Verity system.

Manufacturer Name	Manufacturer Part Number	Mfg. Part Life Cycle Status	Notes
Motorola/Zebra	DS4308-SR7U2100AZW	Alternate	Model DS4308
Zebra Technologies Corp	DS4608-SR00007ZZWW	Preferred	Model DS4608

Table 1 – AML for 1003672

The AML report is available in the following zip file:

4005661A01_Supporting_Documents.zip

The Hart part numbers associated with the handheld scanner component and the AutoBallot kit will receive new revisions as a result of the Approved Manufacturers List Change. The kit is receiving a new revision for tracking purposes only:

Hart P/N	Old Revision	New Revision	Description	ECO
1003672	B	C	SCANNER, 2D IMAGE BARCODE, BLACK	ECO-01387
3005174	B	C	AUTOBALLOT, USB DOOR W/LOCK ASSY, CABLE, 2D BARCODE SCANNER, W/CARTON	ECO-01387

Table 2 – New Item Revisions

4   DATA JUSTIFYING CHANGE

The COTS handheld barcode scanner model DS4608 is the manufacturer's suggested replacement for the DS4308.

The DS4608 model scanner has been tested for use with the AutoBallot kit, which includes the use of a mechanically and electrically obfuscated USB cable for connection to Verity devices. The DS4608 was tested and functioned as an identical plug-and-play replacement to the DS4308 in all applications of the AutoBallot kit:

- Verity Touch Writer
- Verity Print
- Verity Controller

No changes were required to Verity software or to the device operating system to support the change.

Both models have the same regulatory certifications.

Both models have the same environmental operating conditions.

5   JUSTIFICATION OF DE MINIMIS CHANGE STATUS

- These changes do not alter the system's reliability.

- These changes do not alter the system's functionality.

- These changes do not alter the system's capability.

- These changes do not alter the system's operation.

- These changes do not affect software.

6   DE MINIMIS CHANGE DEFINITION

From the United States Election Assistance Commission's Document titled: Voting System Testing & Certification Program Manual, Version 2.0.

> **3.4.2. De Minimis Change—Defined.** A de minimis change is a change to a certified voting system's hardware, software, TDP, or data, the nature of which will not materially alter the system's reliability, functionality, capability, or operation.

End of Document

U. S. ELECTION ASSISTANCE COMMISSION
VOTING SYSTEM TESTING AND CERTIFICATION PROGRAM
1335 East West Highway, Suite 4300
Silver Spring, MD 20910

March 2, 2020   **Sent via e-mail**

Pam Geppert, Director of Certification
Hart InterCivic
15500 Wells Port Drive
Austin, TX 78728

Re: ECO 01387

Dear Ms. Geppert,

This correspondence is to inform you that Hart ECO 01387 is approved.

Sincerely,

Jerome Lovato
Director, Voting System Testing and Certification

Cc: SLI Compliance

HART intercivic

State of Tennessee

Verity Voting 2.4

&

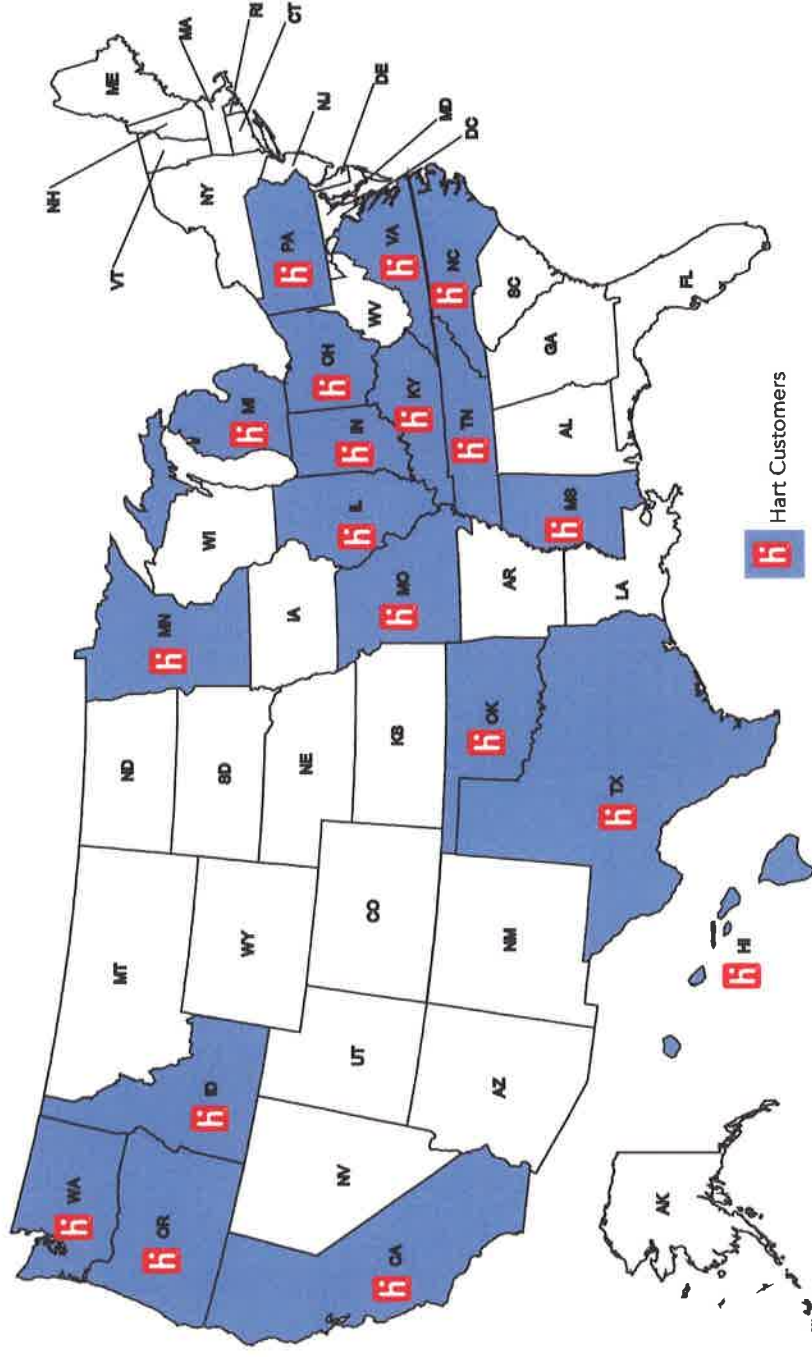De minimis change to Verity Voting

Hart Across the USA

Hart Customers

- Customers in 20 States
- Nearly 800 Jurisdictions
- Over 23,000 Precincts
- Nearly 30 Million Registered Voters
- 2 Statewide (OK and HI)

Hart in Tennessee

- Hart Voting System, since 2006
- Verity Voting 2.3, certified in Tennessee in December 2019
- Direct customers, and through our partner reseller, Harp Enterprises

Certification Status

Federal Certifications:

Verity Voting 2.0: 4/27/2016

Verity Voting 2.2: 12/12/2016

Verity Voting 2.2.1: 3/13/2017

Verity Voting 2.2.2: 5/22/2018

Verity Voting 2.3: 3/15/2019

Verity Voting 2.4: 2/21/2020

State Certifications:

Verity Voting 2.0: 10 (Idaho, Kentucky, New Jersey, Ohio, Oregon, Tennessee, Texas, Utah, Virginia, Washington)

Verity Voting 2.2: 2 (Minnesota, North Carolina)

Verity Voting 2.2.x: 2 (Michigan, Oregon)

Verity Voting 2.3: 13 (Idaho, Indiana, Kentucky, Pennsylvania, Missouri, New Jersey, Ohio, Oregon, South Carolina, Tennessee, Texas, Virginia, Washington)

Verity Voting 3.0.1: 1 (California)

Verity Voting 3.1: 1 (California)

Verity Voting 2.4: 5 in progress (Kentucky, Michigan, Ohio, Tennessee, and Texas)

EAC Certification of Verity Voting 2.4

United States Election Assistance Commission

Certificate of Conformance

Hart Verity Voting 2.4

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: Verity Voting

Model or Version: 2.4

Name of VSTL: SLI Compliance

EAC Certification Number: HRT-VERITY-2.4

Date Issued: February 21, 2020

Mona Harrington
Acting Executive Director

Scope of Certification Attached

Verity Voting 2.4

- There is no new Verity hardware with 2.4. It is a software update.

- Key changes:

  - Touch Writer—Corrects an issue related to communications between the Touch Writer and OKI ballot printer.

  - Central—Adds support for up to 8 networked clients per server in a high scale configuration.

  - Scan—Set how many copies of the Tally report should automatically print when polls are closed.

  - Addresses end-of-life issues with our COTs scanners and printers.

End-of-life COTS components

- Existing COTS printers and scanners are going end-of-life

  - Verity 2.4 supports updated OKI printers and Canon scanners

    - OKI 844dn printer

    - OKI C931e printer

    - Canon DRG-2100 high-speed scanner

    - Canon DRG-2140 high-speed scanner

End-of-life COTS components

OKI C931e printer

Canon DRG-2140 scanner

Elections in light of COVID-19

- The Department of Homeland Security has designated election systems as critical infrastructure

- Proposed federal legislation expanding vote by mail due to COVID-19 concerns

- Many jurisdictions are anticipating increased (if not total) voting by mail in their upcoming 2020 elections

Verity Voting 2.4

- Verity 2.4 is critically important to our Tennessee customers because it addresses end-of-life issues, particularly with our Central scanners.

  - 2.4 allows us to support our customers' expanded vote by mail operations, which are a distinct possibility.

  - Critical for our customers' risk planning.

- We are requesting approval today of Verity 2.4.

De Minimis Change to Verity Voting

De Minimis Change to Verity Voting

Summary

- AutoBallot is an optional barcode scanner kit for Touch Writer and Print that allows integration between an e-pollbook and selecting the proper ballot style.

- The COTS barcode scanner that Hart uses has reached end-of-life.

- The DS4308 model is replaced with the DS4608 model.

De Minimis Change to Verity Voting

- Certified by the EAC as de minimis on March 2, 2020.

- Does not alter the system's reliability, functionality, capability, operation, or software.

- We are requesting approval of this de minimis change.

Tennessee Secretary of State
Tre Hargett

Elections Division
312 Rosa L. Parks Avenue, 7th Floor
Nashville, Tennessee 37243-1102

Mark Goins
Coordinator of Elections

615-741-7956
Mark.Goins@tn.gov

April 15, 2020

Ian S. Piper
Director, Federal Certification
Dominion Voting
1201 18th Street, Suite 210
Denver, CO 80202

Dear Mr. Piper:

On April 13, 2020, you telephonically presented to the State Election Commission (SEC) Dominion Voting Systems Democracy Suite – 5.5-B and the ECO 100630 – Central Scanner.

The State Election Commission suspended their rules due to Covid-19 and approved the use of Dominion's Democracy Suite 5.5-B and the use of the ECO 100630 – Central Scanner (Canon DR-G2140). This letter is to inform you the SEC and I certified Dominion's Voting Systems Democracy Suite 5.5-B and the ECO 100630 – Central Scanner (Canon DR-G2140).

Thank you for your cooperation in the certification process.

Sincerely,

Mark Goins
Coordinator of Elections

Attachments: Dominion Voting Democracy Suite 5.5-B - DVS-DemSuite5.5-B
                EAC Approval Letter ECO 100630

United States Election Assistance Commission

Certificate of Conformance

Dominion Voting Systems
Democracy Suite 5.5-B

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

VVSG 2005 VER. I

EAC CERTIFIED

Product Name: Democracy Suite

Model or Version: 5.5-B

Name of VSTL: Pro V&V

EAC Certification Number: DVS-DemSuite5.5-B

Date Issued: September 11, 2019

Executive Director
U.S. Election Assistance Commission

Scope of Certification Attached

U. S. ELECTION ASSISTANCE COMMISSION
VOTING SYSTEM TESTING AND CERTIFICATION PROGRAM
1335 East West Highway, Suite 4300
Silver Spring, MD 20910

April 13, 2020   <u>**Sent via e-mail**</u>

Ian Piper
Dominion Voting Systems
1201 18th Street, Suite 210
Denver, CO 80202

Re: ECO 100630

Dear Mr. Piper,

This correspondence is to inform you that DVS ECO 100630 is approved.

Sincerely,

Jerome Lovato
Director, Voting System Testing and Certification

Cc: Pro V&V

Kathy Summers

Kathy:

Further to your question on our phone call this morning, we would like jurisdictions to be using D-Suite 5.5-B for the upcoming August election. We have additional central scanner options in 5.5-B as well as adding the ICE unit and the ICP2 unit to this system configuration. We also have the Microsoft Windows 10 Security Patch (from Jan. 14th, 2020) that we would like to apply on those systems. In the current environment this election season, Dominion is working to establish more central counting options in the advent of jurisdictions needing to count more absentee ballots then they have in the past. Next quarter, we will likely have an additional central scanner option to bring to the state that wasn't included in the 5.5-B EAC system configuration, but is supported by that system.

The question we have is whether the state will only require surveys from other jurisdictions who have used 5.5-B, or whether the state will require to be on-site to witness its use during a live election. If the latter, then there wouldn't be sufficient time to have that event occur in time to implement 5.5-B for the August elections.

If you have any questions, please let me know.

Sincerely:

IAN S. PIPER | DIRECTOR, FEDERAL CERTIFICATION

DOMINION VOTING SYSTEMS, INC.
1201 18th Street, Suite 210, DENVER, CO 80202
866-654-VOTE (8683) | DOMINIONVOTING.COM

720-257-5209 OFFICE (x9221)
703-244-3180 MOBILE

U. S. Election Assistance Commission
Voting System Testing and Certification Program
1335 East West Highway, Suite 4300
Silver Spring, MD 20910

September 12, 2019

Ian Piper, Director of Certification
Dominion Voting Systems
1201 18th Street, Suite 210
Denver, CO 80202   **Sent via e-mail**

Re: Agency Decision – Grant of Certification

Dear Mr. Piper,

As required under §5.9 of the EAC's Voting System Testing and Certification Program Manual,
Dominion Voting Systems and Pro V&V have provided the necessary documentation for the
Dominion Democracy Suite 5.5-B voting system verifying that 1) the trusted build has been
performed, 2) software has been deposited in an approved repository, 3) system identification
tools are available to election officials, and 4) signed a letter stating, under penalty of law, that
you have:

1. Performed a trusted build consistent with the requirements of §5.6 of the EAC's
   Certification Manual;
2. Deposited software consistent with §5.7 of the EAC's Certification Manual;
3. Created and made available system identification tools consistent with §5.8 of the EAC's
   Certification Manual (a copy and description of the system identification tool developed
   must be provided with the letter); and
4. Upon a final decision to grant certification, the manufacturer accepts the certification and
   all conditions placed on the certification.

Based on the review of the documentation above and the fact that the Dominion Democracy
Suite 5.5-B voting system successfully completed conformance testing to the 2005 Voluntary
Voting System Guidelines (2005 VVSG), the Voting System Testing & Certification Program
Director has recommended EAC certification of this system.

I have reviewed all of the documentation and concur with the Program Director's
recommendation. As such, I hereby grant EAC Certification to the Dominion Democracy Suite
5.5-B voting system to the 2005 Voluntary Voting System Guidelines.

The EAC certification number issued for this system is: **DVS-DemSuite5.5-B**. In addition, a Certificate of Conformance shall be provided to Dominion Voting Systems as evidence of the EAC certification of the Dominion Democracy Suite 5.5-B voting system. The Certificate of Conformance shall be provided to Dominion Voting Systems no later than five business days from the date of this letter, and it shall be posted on the EAC's Web site.

As stated in §5.11 of the EAC's Certification Manual, *the EAC certification and certificate apply only to the specific voting system configuration(s) identified, submitted, and evaluated under the Certification Program. Any modification to the system not authorized by the EAC shall void the certificate.*

If you have any questions or need further information, please do not hesitate to contact Jerome Lovato at your earliest convenience. I thank you in advance for your time and attention to this matter and congratulate on this achievement.

Sincerely,

Brian D. Newby
Executive Director
Decision Authority

cc: Jack Cobb, Pro V&V

VVSG 2005 VER. I

EAC CERTIFIED

United States Election Assistance Commission

Certificate of Conformance

Dominion Voting Systems Democracy Suite 5.5-B

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Executive Director
U.S. Election Assistance Commission

Scope of Certification Attached

Product Name: Democracy Suite

Model or Version: 5.5-B

Name of VSTL: Pro V&V

EAC Certification Number: DVS-DemSuite5.5-B

Date Issued: September 11, 2019

Scope of Certification

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

System Overview:

The D-Suite 5.5-B Voting System is a paper-based optical scan voting system with a hybrid paper/DRE option consisting of the following major components: The Election Management System (EMS), the ImageCast Central (ICC), the ImageCast Precinct (ICP and ICP2), the ImageCast Evolution (ICE), the ImageCast X (ICX) DRE w/ Reports Printer, ImageCast X (ICX) DRE w/ voter-verifiable paper audit trail (VVPAT), and the ImageCast X ballot marking device (BMD). The D-Suite 5.5-B Voting System configuration is a modification from the EAC approved D-Suite 5.5 system configuration.

Language capability:

System supports Alaska Native, Apache, Bengali, Chinese, English, Eskimo, Filipino, French, Hindi, Japanese, Jicarilla, Keres, Khmer, Korean, Navajo, Seminole, Spanish, Thai, Towa, Ute, Vietnamese, and Yuman.

Democracy Suite 5.5-B System Diagram
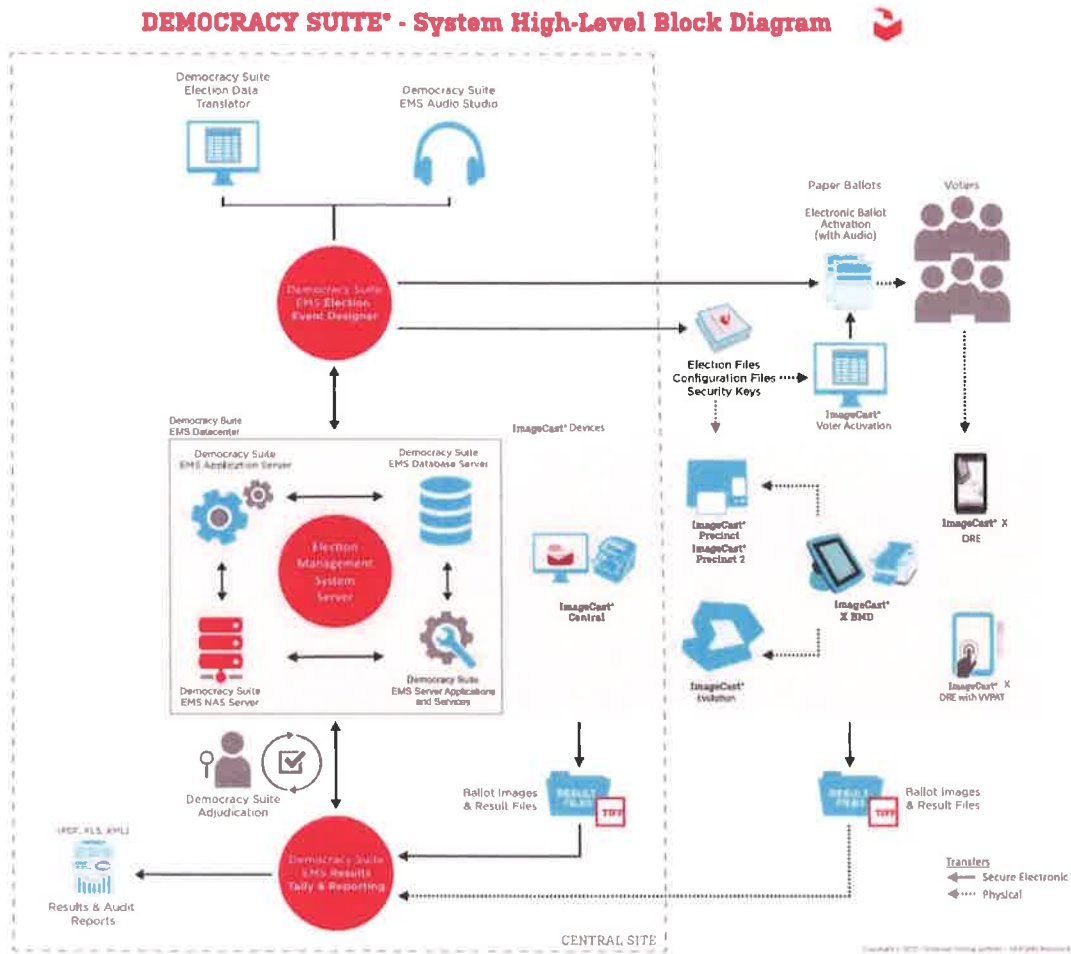
Components Included:

This section provides information describing the components and revision level of the primary components included in this Certification.

Voting System Software Components:

System Component	Software or Firmware Version	Operating System or COTS	Comments
EMS Election Event Designer (EED)	5.5.32.4	Windows 10 Pro	EMS
EMS Results Tally and Reporting (RTR)	5.5.32.4	Windows 10 Pro	EMS
EMS Application Server	5.5.32.4	Windows Server 2012 R2 Windows 10 Pro	EMS
EMS File System Service (FSS)	5.5.32.4	Window 10 Pro	EMS
EMS Audio Studio (AS)	5.5.32.4	Windows 10 Pro	EMS
EMS Data Center Manager (DCM)	5.5.32.4	Windows Server 2012 R2 Windows 10 Pro	EMS
EMS Election Data Translator (EDT)	5.5.32.4	Windows 10 Pro	EMS
ImageCast Voter Activation (ICVA)	5.5.32.4	Windows 10 Pro	EMS
EMS Adjudication (ADJ)	5.5.32.4	Windows 10 Pro	EMS
EMS Adjudication Services	5.5.32.4	Windows 10 Pro	EMS
Smart Card Helper Service (SCHS)	5.5.32.4	Windows 10 Pro	EMS
Election Firmware	5.5.31.1	uClinux	ICP
Firmware Updater	5.5.31.1	uClinux	ICP
Firmware Extractor	5.5.31.1	uClinux	ICP
Kernel (uClinux)	5.5.31.1	Modified COTS	ICP
Boot Loader (COLILO)	20040221	Modified COTS	ICP
Asymmetric Key Generator	5.5.31.1	uClinux	ICP
Asymmetric Key Exchange Utility	5.5.31.1	uClinux	ICP
Firmware Extractor (Technician Key)	5.5.31.1	uClinux	ICP
ICP2 Application	5.5.1.8	uClinux	ICP2
ICP2 Update Card	5.5.1.8	uClinux	ICP2
Voting Machine	5.5.6.5	Ubuntu Linux	ICE
Election Application	5.5.6.5	Ubuntu Linux	ICE
ImageCast Central Application	5.5.32.5	Windows 10 Pro	ICC
ICX Application	5.5.13.2	Android 5.1.1 (ICX Prime) Android 4.4.4 (ICX Classic)	ICX

Voting System Platform:

System Component	Version	Operating System or COTS	Comments
Microsoft Windows Server	2012 R2 Standard	Unmodified COTS	EMS Server SW Component
Microsoft Windows	10 Professional	Unmodified COTS	EMS Client/Server SW Component
.NET Framework	3.5	Unmodified COTS	EMS Client/Server SW Component
Microsoft Visual J#	2.0	Unmodified COTS	EMS Client/Server SW Component
Microsoft Visual C++ 2013 Redistributable	2013	Unmodified COTS	EMS Client/Server SW Component
Microsoft Visual C++ 2015 Redistributable	2015	Unmodified COTS	EMS Client/Server SW Component

System Component	Version	Operating System or COTS	Comments
Java Runtime Environment	7u80	Unmodified COTS	EMS Client/Server SW Component
Java Runtime Environment	8u144	Unmodified COTS	EMS Client/Server SW Component
Microsoft SQL Server 2016Standard	2016 Standard	Unmodified COTS	EMS Client/Server SW Component
Microsoft SQL Server 2016 Service Pack 1	2016 SP1	Unmodified COTS	EMS Client/Server SW Component
Microsoft SQL Server 2016 SP1 Express	2016 SP1	Unmodified COTS	EMS Client/Server SW Component
Cepstral Voices	6.2.3.801	Unmodified COTS	EMS Client/Server SW Component
Arial Narrow Fonts	2.37a	Unmodified COTS	EMS Client/Server SW Component
Maxim iButton Driver	4.05	Unmodified COTS	EMS Client/Server SW Component
Adobe Reader DC	AcrobatDC	Unmodified COTS	EMS Client/Server SW Component
Microsoft Access Database Engine	2010	Unmodified COTS	EMS Client/Server SW Component
Open XML SDK 2.0 for Microsoft Office	2.0	Unmodified COTS	EMS Client/Server SW Component
Infragistics NetAdvantage Win Forms 2011.1	2011 Vol. 1	Unmodified COTS	EMS SW Platform
Infragistics NetAdvantage WPF 2012.1	2012 Vol. 1	Unmodified COTS	EMS SW Platform
TX Text Control Library for .NET	16.0	Unmodified COTS	EMS SW Platform
SOX	14.3.1	Unmodified COTS	EMS SW Platform
NLog	1.0.0.505	Unmodified COTS	EMS SW Platform
iTextSharp	5.0.5	Unmodified COTS	EMS SW Platform
OpenSSL	1.0.2K	Unmodified COTS	EMS SW Platform
OpenSSL FIPS Object Module	2.0.14 (Cert 1747)	Unmodified COTS	EMS SW Platform
SQLite	1.0.103.0	Unmodified COTS	EMS SW Platform
Lame	3.99.4	Unmodified COTS	EMS SW Platform
Speex	1.0.4	Unmodified COTS	EMS SW Platform
Ghostscript	9.04	Unmodified COTS	EMS SW Platform
One Wire API for .NET	4.0.2.0	Unmodified COTS	EMS SW Platform
Avalon-framework-cvs-20020806	20020806	Unmodified COTS	EMS SW Platform
Batik	0.20-5	Unmodified COTS	EMS SW Platform
Fop	0.20-5	Unmodified COTS	EMS SW Platform
Microsoft Visual J# 2.0 Redistributable Package – Second Edition (x64)	2.0	Unmodified COTS	EMS SW Platform
Entity framework	6.1.3	Unmodified COTS	EMS SW Platform
Spreadsheetlight	3.4.3	Unmodified COTS	EMS SW Platform
Open XML SDK 2.0 for Microsoft Office	2.0.5022.0	Unmodified COTS	EMS SW Platform
Open SSL	1.0.2K	Unmodified COTS	ICP
OpenSSL FIPS Object Module	2.0.10 (Cert 1747)	Unmodified COTS	ICP
Zlib	1.2.3	Unmodified COTS	ICP
uClinux	20070130	Modified COTS	ICP
Kernel (Linux)	2.6.30.9-dvs-36	Modified COTS	ICE

System Component	Version	Operating System or COTS	Comments
U-Boot	1.3.4	Modified COTS	ICE
Google Text-to-Speech Engine	3.11.12	Unmodified COTS	ICX SW
Kernel	4.9.11	Modified COTS	ICP2
U-Boot	2017.03	Modified COTS	ICP2
Zxing Barcode Scanner	4.7.5	Modified COTS	ICX SW
SoundTouch	1.9.2	Modified COTS	ICX SW
ICX Prime Android 5.1.1 Image	0405	Modified COTS	ICX SW
ICX Classic Android 4.4.4 Image	0.0.98	Modified COTS	ICX SW
OpenSSL FIPS Object Module	2.0.10 (Cert 2473)	Unmodified COTS	ICX SW Build Library
OpenSSL	1.0.2K	Unmodified COTS	ICC SW Build Library
OpenSSL FIPS Object Module	2.0.10 (Cert 1747)	Unmodified COTS	ICC SW Build Library
1-Wire Driver (x86)	4.05	Unmodified COTS	ICC Runtime SW
1-Wire Driver (x64)	4.05	Unmodified COTS	ICC Runtime SW
Canon DR-G1130 TWAIN Driver	1.2 SP6	Unmodified COTS	ICC Runtime SW
Canon DR-G160II TWAIN Driver	1.2 SP6	Unmodified COTS	ICC Runtime SW
Canon DR-M260 TWAIN Driver,	1.1 SP2	Unmodified COTS	ICC Runtime SW
InoTec HiPro 821 TWAIN Driver	1.2.3.17	Unmodified COTS	ICC Runtime SW
Visual C++ 2013 Redistributable (x86)	12.0.30501	Unmodified COTS	ICC Runtime SW
Machine Configuration File (MCF)	5.5.12.1_20190510	Proprietary	ICX Configuration File
Device Configuration File (DCF)	5.5.31_20190423	Proprietary	ICP and ICC Configuration File
ICE Machine Behavior Settings	5.5.6.3 20190512	Proprietary	ICE Configuration
ICP2 Machine Behavior Settings	5.5.1.4 20190510	Proprietary	ICP2 Configuration

Hardware Components:

System Component	Hardware Version	Proprietary or COTS	Comments
ImageCast Precinct (ICP)	PCOS-320C	Proprietary	Precinct Scanner
ImageCast Precinct (ICP)	PCOS-320A	Proprietary	Precinct Scanner
ImageCast 2 Precinct (ICP2)	PCOS-330A	Proprietary	Precinct Scanner
ImageCast Evolution (ICE)	PCOS-410A	Proprietary	Precinct Scanner
ICP Ballot Box	BOX-330A	Proprietary	Ballot Box
ICP Ballot Box	BOX-340C	Proprietary	Ballot Box
ICP Ballot Box	BOX-341C	Proprietary	Ballot Box
ICP Ballot Box	ElectionSource IM-COLLAPSIBLE	Proprietary	Ballot Box
ICE Ballot Box	BOX-410A	Proprietary	Ballot Box
ICE Ballot Box	BOX-420A	Proprietary	Ballot Box
ICP2 Ballot Box	BOX-350A	Proprietary	Ballot Box
ICP2 Ballot Box	BOX-340C	Proprietary	Ballot Box
ICP2 Ballot Box	BOX-341C	Proprietary	Ballot Box
ICP2 Ballot Box	ElectionSource IM-COLLAPSIBLE	Proprietary	Ballot Box
ICX UPS Inline EMI Filter	1.0	Proprietary	EMI Filter
ICX Tablet (Classic)	aValue 15" Tablet (SID-15V)	COTS	Ballot Marking Device
ICX Tablet (Classic)	aValue 21" Tablet (SID-21V) (Steel or Aluminum chassis)	COTS	Ballot Marking Device
ICX Tablet (Prime)	aValue 21" Tablet (HID-21V) (Steel or Aluminum chassis)	COTS	Ballot Marking Device or Direct Recording Electronic
Thermal Printer	SII RP-D10	COTS	Report Printer

System Component	Hardware Version	Proprietary or COTS	Comments
Thermal Printer	KFI VRP3	COTS	Voter-verifiable paper audit trail (VVPAT)
Server	Dell PowerEdge R620	COTS	Standard Server
Server	Dell PowerEdge R630	COTS	Standard Server
Server	Dell PowerEdge R640	COTS	Standard Server
ICC Workstation HW	Dell OptiPlex 7440 All in One	COTS	
ICC Workstation HW	Dell OptiPlex 3050 All In One	COTS	
ICC Workstation HW	Dell OptiPlex 9030 All In One	COTS	
ICC Workstation HW	Dell OptiPlex 9020 All In One	COTS	
ICC Workstation HW	Dell OptiPlex 9010 All In One	COTS	
ICC Scanner	Canon imageFormula DR-G1130	COTS	Central Count Scanner
ICC Scanner	Canon imageFormula DR-M160II	COTS	Central Count Scanner
ICC Scanner	Canon imageFormula DR-M260	COTS	Central Count Scanner
ICC Scanner	InoTec HiPro 821	COTS	Central Count Scanner
ICC Scanner	Dell Optiplex 7050	COTS	
ICC Scanner	Dell 2418HT Monitor	COTS	
Client Workstation HW and Express Server	Dell Precision 3430	COTS	
Client Workstation HW and Express Server	Dell Precision 3431	COTS	
Client Workstation HW and Express Server	Dell Precision T3420	COTS	
Client Workstation HW	Dell Precision T1700	COTS	
Client Workstation HW	Dell Latitude 3400	COTS	
Client Workstation HW	Dell Latitude 3490	COTS	
Client Workstation HW	Dell Latitude E3480	COTS	
Client Workstation HW	Dell Latitude E3470	COTS	
Client Workstation HW	Dell Latitude E7450	COTS	
ICX Printer	HP LaserJet Pro Printer M402dn	COTS	
ICX Printer	HP LaserJet Pro Printer M402dne	COTS	
Monitor	Dell Monitor KM632	COTS	
Monitor	Dell Monitor P2414Hb	COTS	
Monitor	P2419H	COTS	
Monitor	P2417H	COTS	
Monitor	Dell Ultrasharp 24" Monitor U2414H	COTS	
CD/DVD Reader	Dell DVD Multi Recorder GP60NB60	COTS	
iButton Programmer	Maxim iButton Programmer DS9490R# with DS1402-RP8+	COTS	
UPS	Tripp Lite SMART1500RMXL2U	COTS	
UPS	APC SMT1500C Smart-UPS	COTS	
UPS	APC SMT1500 Smart-UPS	COTS	
UPS	APC BE600M1	COTS	
UPS	APC BR1000G	COTS	
Network Switch	Dell X1008	COTS	
Network Switch	Dell X1018	COTS	
Network Switch	Dell X1026	COTS	
Network Switch	Dell PowerConnect 2808	COTS	
Sip and Puff	Enabling Devices #972	COTS	
Headphones	Cyber Acoustics ACM-70 and ACM-70B	COTS	
4-way Joystick Controller	S26	Modified COTS	

System Component	Hardware Version	Proprietary or COTS	Comments
Rocker (Paddle) Switch	Enabling Device #971	COTS	
Rocker (Paddle) Switch	AbleNet 10033400 (2x)	COTS	
CF Card Reader	IOGEAR SDHC/microSDHC 0U51USC410	COTS	
CF Card Dual-Slot Reader	Lexar USB 3.0	COTS	
CF Card Reader	Hoodman Steel USB 3.0 102015	COTS	
CF Card Reader	Lexar Professional CFR1	COTS	
CF Card Reader	Kingston FCR-HS4	COTS	
ATI	ATI handset	Proprietary	
ATI	ATI-USB handset	Proprietary	
ACS PC-Linked Smart Card Reader	ACR38	COTS	
ACS PC-Linked Smart Card Reader	ACR39	COTS	

System Limitations

This table depicts the limits the system has been tested and certified to meet.

Characteristic	Limiting Component	Limit	Comment
Ballot positions	Ballot	292*/462**	Landscape Ballot: 240 candidates + 24 write-ins + 28 Yes/No choices.
Precincts in an election	EMS	1000; 250	Standard; Express
Contests in an election	EMS	1000; 250	Standard; Express
Candidates/Counters in an election	EMS	10000; 2500	Standard; Express
Candidates/Counters in a precinct	Ballot	240*/462**	Both
Candidates/Counters in a tabulator	Tabulator	10000; 2500	Standard; Express
Ballot Styles in an election	Tabulator	3000; 750	Standard; Express
Ballot IDs in a tabulator	Tabulator	200	Both
Contests in a ballot style	Ballot	38*/156**	Both
Candidates in a contest	Ballot	240*/231**	Both
Ballot styles in a precinct	Tabulator	5	Both
Number of political parties	Tabulator	30	Both
"vote for" in a contest	Ballot	24*/30**	Both
Supported languages in an election	Tabulator	5	Both
Number of write-ins	Ballot	24*/462**	Both

* Reflects the system limit for a ballot printed in landscape.

** Reflects the system limit for a ballot printed in portrait.

Functionality

2005 VVSG Supported Functionality Declaration

Feature/Characteristic	Yes/No	Comment
Voter Verified Paper Audit Trails		
VVPAT	YES	
Accessibility		
Forward Approach	YES	
Parallel (Side) Approach	YES	
Closed Primary		
Primary: Closed	YES	
Open Primary		
Primary: Open Standard (provide definition of how supported)	YES	
Primary: Open Blanket (provide definition of how supported)	YES	
Partisan & Non-Partisan:		
Partisan & Non-Partisan: Vote for 1 of N race	YES	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	YES	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and write-in voting	YES	
Partisan & Non-Partisan "vote for 1" race with no declared candidates and write-in voting	YES	
Write-In Voting:		
Write-in Voting: System default is a voting position identified for write-ins.	YES	
Write-in Voting: Without selecting a write in position.	NO	
Write-in: With No Declared Candidates	YES	
Write-in: Identification of write-ins for resolution at central count	YES	
Primary Presidential Delegation Nominations & Slates:		
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party	YES	
Slate & Group Voting: one selection votes the slate.	YES	
Ballot Rotation:		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	YES	Equal time rotation
Straight Party Voting:		
Straight Party: A single selection for partisan races in a general election	YES	
Straight Party: Vote for each candidate individually	YES	
Straight Party: Modify straight party selections with crossover votes	YES	
Straight Party: A race without a candidate for one party	YES	
Straight Party: "N of M race (where "N">1)	YES	
Straight Party: Excludes a partisan contest from the straight party selection	YES	

Feature/Characteristic	Yes/No	Comment
Cross-Party Endorsement:		
Cross party endorsements, multiple parties endorse one candidate.	YES	
Split Precincts:		
Split Precincts: Multiple ballot styles	YES	
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	YES	
Split Precincts: DRE matches voter to all applicable races.	YES	
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	YES	
Vote N of M:		
Vote for N of M: Counts each selected candidate, if the maximum is not exceeded.	YES	
Vote for N of M: Invalidates all candidates in an overvote (paper)	YES	
Recall Issues, with options:		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote Yes or No Question)	YES	
Recall Issues with Options: Retain is the first option, Replacement candidate for the second or more options (Vote 1 of M)	NO	
Recall Issues with Options: Two contests with access to a second contest conditional upon a specific vote in contest one. (Must vote Yes to vote in 2nd contest.)	NO	
Recall Issues with Options: Two contests with access to a second contest conditional upon any vote in contest one. (Must vote Yes to vote in 2nd contest.)	NO	
Cumulative Voting		
Cumulative Voting: Voters are permitted to cast, as many votes as there are seats to be filled for one or more candidates. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidate.	NO	
Ranked Order Voting		
Ranked Order Voting: Voters can write in a ranked vote.	NO	
Ranked Order Voting: A ballot stops being counting when all ranked choices have been eliminated	NO	
Ranked Order Voting: A ballot with a skipped rank counts the vote for the next rank.	NO	
Ranked Order Voting: Voters rank candidates in a contest in order of choice. A candidate receiving a majority of the first choice votes wins. If no candidate receives a majority of first choice votes, the last place candidate is deleted, each ballot cast for the deleted candidate counts for the second choice candidate listed on the ballot. The process of eliminating the last place candidate and recounting the ballots continues until one candidate receives a majority of the vote	NO	

Feature/Characteristic	Yes/No	Comment
Ranked Order Voting: A ballot with two choices ranked the same, stops being counted at the point of two similarly ranked choices.	NO	
Ranked Order Voting: The total number of votes for two or more candidates with the least votes is less than the votes of the candidate with the next highest number of votes, the candidates with the least votes are eliminated simultaneously and their votes transferred to the next-ranked continuing candidate.	NO	

Feature/Characteristic	Yes/No	Comment
Provisional or Challenged Ballots		
Provisional/Challenged Ballots: A voted provisional ballots is identified but not included in the tabulation, but can be added in the central count.	YES	
Provisional/Challenged Ballots: A voted provisional ballots is included in the tabulation, but is identified and can be subtracted in the central count	NO	
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of the ballot.	YES	
Overvotes (must support for specific type of voting system)		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	YES	Overvotes cause a warning to the voter and can be configured to allow voter to override.
Overvotes: DRE: Prevented from or requires correction of overvoting.	YES	
Overvotes: If a system does not prevent overvotes, it must count them. Define how overvotes are counted.	YES	If allowed via voter override, overvotes are tallied separately.
Overvotes: DRE systems that provide a method to data enter absentee votes must account for overvotes.	N/A	
Undervotes		
Undervotes: System counts undervotes cast for accounting purposes	YES	
Blank Ballots		
Totally Blank Ballots: Any blank ballot alert is tested.	YES	Precinct voters receive a warning; both precinct and central scanners will warn on blank ballots.
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	YES	Blank ballots are flagged. These ballots can be manually examined and then be scanned and accepted as blank; or precinct voter can override and accept.
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	YES	Operators can examine a blank ballot, re-mark if needed and allowed, and then re-scan it.
Networking		
Wide Area Network – Use of Modems	NO	
Wide Area Network – Use of Wireless	NO	

Feature/Characteristic	Yes/No	Comment
Local Area Network – Use of TCP/IP	YES	Client/server only
Local Area Network – Use of Infrared	NO	
Local Area Network – Use of Wireless	NO	
FIPS 140-2 validated cryptographic module	YES	
Used as (if applicable):		
Precinct counting device	YES	ImageCast Precinct
Central counting device	YES	ImageCast Central

Baseline Certification Engineering Change Orders (ECO)

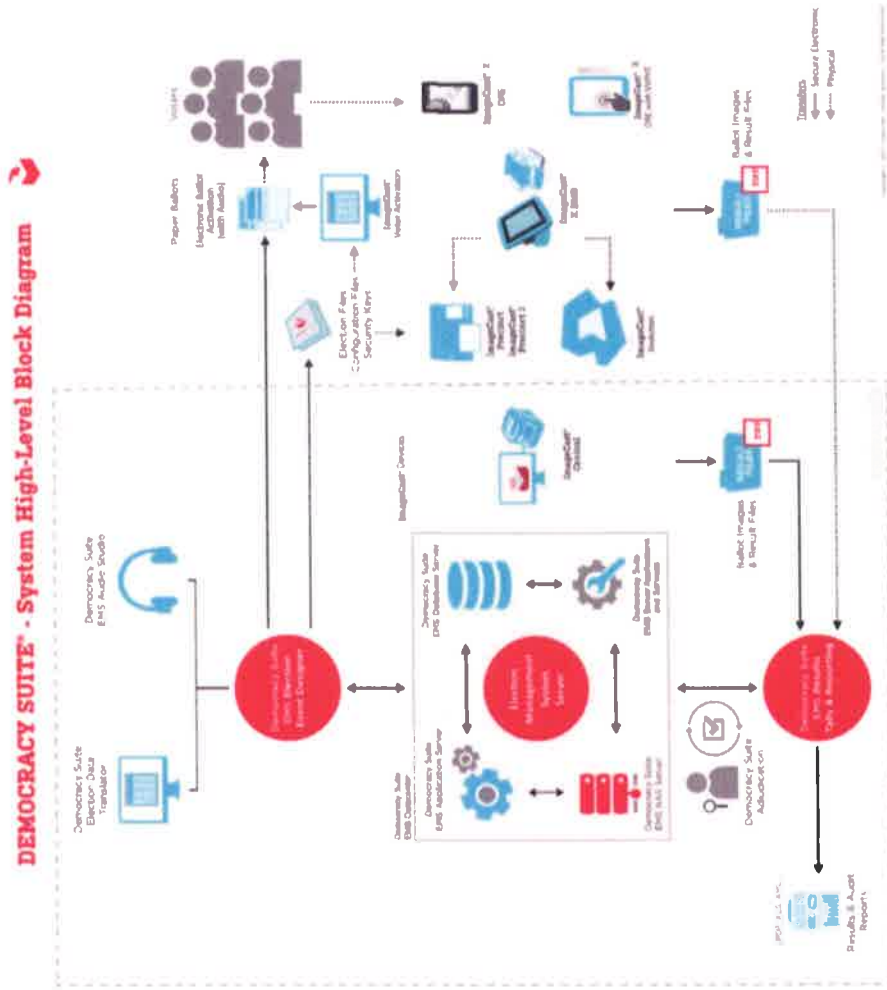| ECO #	Component	Description
100503	ICP PCOS-320C & ICP PCOS-320A	Adding a COTS collapsible ballot box to AVL for use with the ICP
100521	Servers and Workstations	Added DELL P2419H monitor as a display device.
100527	EMS Workstations.	Added DELL Latitude 3490 computer with updated i3-8130U processor (Dual Core, 4MB Cache, 2.2GHz) to DVS PN 190-000061 (a client workstation).
100543	ICC Scanner	Update to the DR-G1130 Scanner LCD Panel User Interface.
100588	ICX Workstation	Added new models of VVPAT printer for use with the D-Suite ICX workstation due to previous model becoming commercially unavailable
100596	EMS Workstation	Added DELL Latitude 3400 computer as a client workstation due to the DELL Latitude 3490 computer becoming commercially unavailable for purchase
100597	EMS Server	Added DELL PowerEdge R640 computer with new processor and RAM as an AVL to the existing R640 server computer configurations
100602	EMS Server and Workstations	Added DELL Precision 3431 computer in an EMS Express Server and EMS Client Workstation configuration due to the DELL Precision 3430 computer becoming commercially unavailable for purchase
100603	ICC Scanner	Added DELL P2418HT monitor as a display device for ICC HiPro scanner workstation configuration due to the Lenovo 10QXPAR1US monitor becoming commercially unavailable for purchase

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Our customers come first.

APRIL 13, 2020

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DEMOCRACY SUITE 5.5-B CERTIFICATION
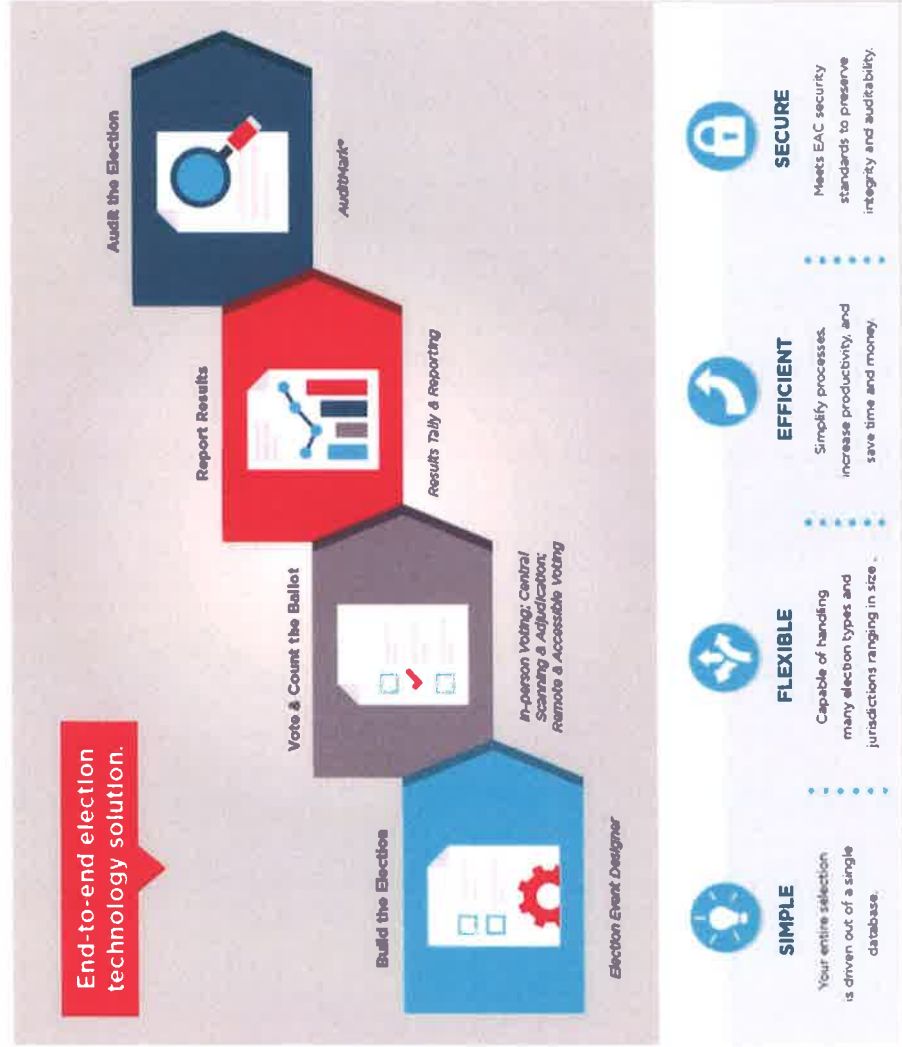
FOR THE STATE OF TENNESSEE

DEMOCRACY SUITE 5.5-B CERTIFICATION OVERVIEW

- Dominion Voting Systems Democracy Suite 5.5-B system overview – Ian Piper

- Dominion ECO 100630 - Canon DR-G2140 Scanner – Ian Piper

- Q & A – Ian Piper, John Hastings, David Moreno

PRESENTATION OVERVIEW

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DEMOCRACY SUITE 5.5-B HIGH-LEVEL SYSTEM OVERVIEW

DEMOCRACY SUITE® - System High-Level Block Diagram

SYSTEM OVERVIEW

DEMOCRACY SUITE 5.5-B ELECTION MANAGEMENT SYSTEM (EMS)

End-to-end election technology solution.

Build the Election
Election Event Designer

Vote & Count the Ballot
In-person Voting; Central Scanning & Adjudication; Remote & Accessible Voting

Report Results
Results Tally & Reporting

Audit the Election
AuditMark®

SIMPLE
Your entire selection is driven out of a single database.

FLEXIBLE
Capable of handling many election types and jurisdictions ranging in size.

EFFICIENT
Simplify processes, increase productivity, and save time and money.

SECURE
Meets EAC security standards to preserve integrity and auditability.

SYSTEM OVERVIEW

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DEMOCRACY SUITE 5.5-B IMAGECAST TABULATORS/OPTICAL SCANNERS

IMAGECAST® Evolution on Ballot Box

Precinct tabulator with secure ballot cast storage

IMAGECAST® Precinct 2

Next generation of the ImageCast Precinct tabulator

IMAGECAST® Precinct

Lightweight, affordable precinct tabulator

IMAGECAST® Evolution w/ Dual Display

Precinct tabulator with Accessible Voting Attachments

SYSTEM OVERVIEW

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DEMOCRACY SUITE 5.5-B BALLOT MARKING DEVICES AND VVPAT

IMAGECAST® X BMD
Universal tabulator
in Ballot Marking Device configuration

IMAGECAST® X DRE w/ VVPAT
Universal tabulator
in DRE w/ VVPAT configuration

SYSTEM OVERVIEW

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DEMOCRACY SUITE 5.5-B CENTRAL COUNT OPTICAL SCANNERS

Canon DR-G2140
140 pages per minute*

Note: Included in this
slide as per ECO 100630

Canon DR-G1130
130 pages per minute*

Canon DR-M260
60 pages per minute*

* - Pages per minute ratings based on letter sized paper

IMAGECAST® Central

Scalable, efficient central count solution

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SYSTEM OVERVIEW

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DEMOCRACY SUITE 5.5-B CENTRAL COUNT OPTICAL SCANNERS

IMAGECAST® Central HiPro

High speed central count solution
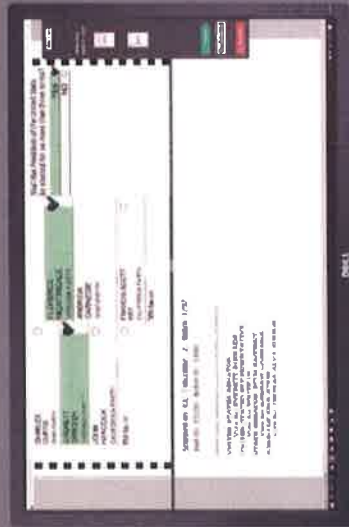

InterScan
HiPro 821dd

- Dual input trays
- Allow batches of more than 500 ballots
- Capable of scanning 10,000 to 18,000 ballots per hour at 300 DPI
- Fully integrates with Democracy Suite applications
- Customizable outstack conditions

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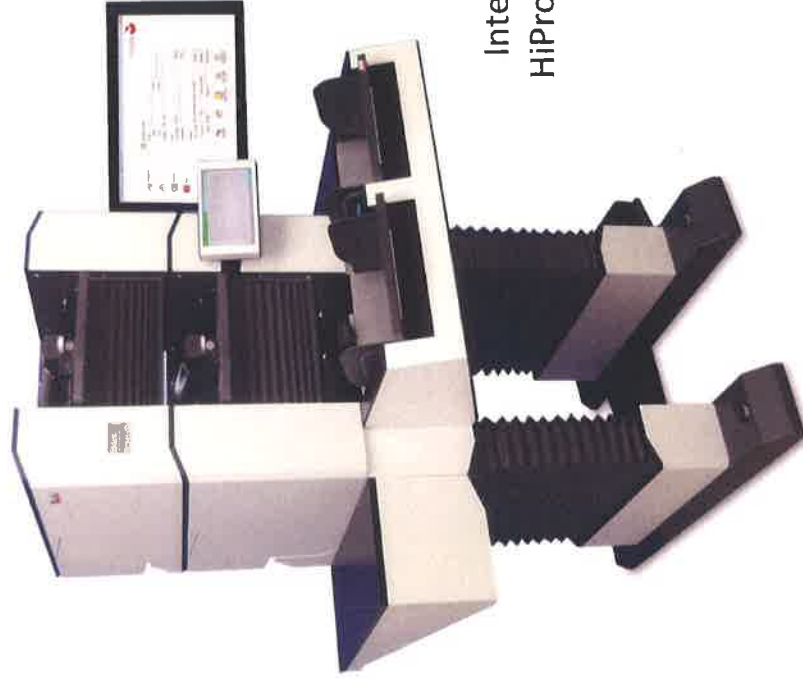
ADJUDICATION

The first digital tool to streamline ballot review & adjudication.

SIMPLE

Contests needing review are automatically highlighted to help adjudicators.

SCALABLE

Have as many reviewing teams as the jurisdiction requires, ensuring efficient processes.

EFFICIENT

Eliminates additional costs, time and resources associated with duplicating and re-scanning ballots.

FLEXIBLE

Define out-stack conditions to review, such as blank ballots, undervotes, marginal marks, and write-ins.

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SYSTEM CHANGE NOTES

GENERAL

➤ Addition of ImageCast Evolution
➤ Addition of InoTec HiPro 821 scanner
➤ Addition of Canon DR-M260 scanner
➤ Addition of ImageCast Precinct 2 (PCOS-330A)

EMS ELECTION EVENT DESIGNER

➤ Added support for Ballot ID creation by Precinct Portion

ICC

➤ Corrected drop-out of red colored ovals when using the HiPro scanner

ICP

➤ Added support for the new election file revision number of 0x0307 which increased the field size of the 'Number of Ballots' field in the VIF ELECTION.DVD file from an unsigned short (2 bytes) to an unsigned integer (4 bytes)

ICX

➤ Corrected discrepancy between Total Ballots Cast and Report Tape after results are deleted manually from the ICX
➤ Corrected issue where the application was not providing a warning for low paper amount on VVPAT tape

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D-SUITE 5.5-B CHANGE NOTES   10

ECO 100630   Canon DR-G2140 Scanner for Central Counting

- Canon replaced the DR-G1130 scanner with the DR-G2140 scanner

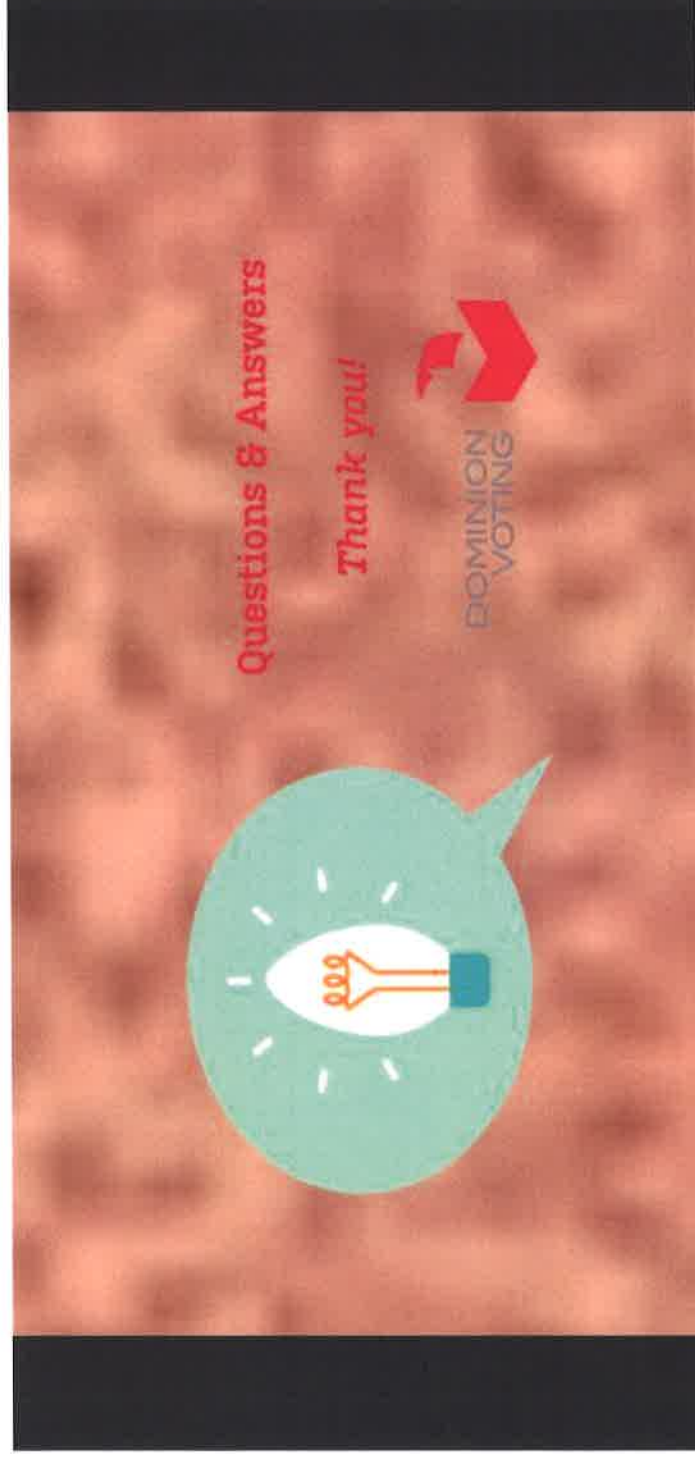| Specification	DR-G1130	DR-G2140
Pages per Minute (ppm) (based on letter size paper)	130ppm	140ppm
IC Chip Performance	60MHz	120MHz
CIS Sensor Performance	122usec/line	90usec/line

- No impact on the product's performance with the D-Suite system

DR-G2140

DR-G1130

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5.5-B SYSTEM CERTIFICATION QUESTIONS

Questions & Answers

Thank you!

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Q & A

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Voting System Reference Questions

Reference Name and Contact Information: Renee Suaava, Tabulation Manager; office:602-506-5108; cell:480-238-7797 rsuaaava@risc.maricopa.gov

Jurisdiction Name: Maricopa County

Quantity, type and version of voting equipment and software installed: Spreadsheet attached

How many voters are in your jurisdiction? 2.3 Million

When did your jurisdiction purchase the system? Not purchased; Lease began in 2019

How many elections have you used the system? Two

Have any upgrades been made to the system since you purchased it? None Why? We have not had the system long enough.

Are you still using the same system? Yes.

Describe your overall impression of the system based on experiences in your jurisdiction. We are very happy with the system. It is faster, more secure, and more user friendly than our previous system.

Are you satisfied with the training provided to your staff? Yes.

Are you satisfied with the training provided for poll officials? Yes.

Are you satisfied with the support the vendor has provided for early voting (if applicable), Election Day, and post-election activities? Yes. Our support staff is always available to us.

Are you satisfied with the cost of support? Do you feel the cost of support is competitive or too expensive? Yes, we are satisfied. We feel it is competitive with other vendors.

Describe any issues the vendor has had meeting your jurisdiction's requirements, if any. None. Dominion has not only met, but has exceeded all of our expectations. They are very responsive to our ever-changing needs.

Describe any issues your jurisdiction has had regarding equipment availability, if any. None. Equipment was delivered on schedule and without issue. (Except for a broken down truck that showed up a day late.)

Describe any issues your jurisdiction has had regarding the accuracy of election results, if any. None

Describe any other issues your jurisdiction has had with the system, if any. None.

Has the vendor been responsive in addressing issues? Yes. Our on-site staff is very responsive and quick to move matters up the chain when necessary. Management and upper management is very responsive as well.

Describe any feedback (positive or negative) received from poll officials about the system. We have received many comments about the ICX - accessible ballot marking device. Poll officials are very pleased with the ease of setup and use of the ICX. They also like the fact that everyone now votes a paper ballot.

Describe any feedback (positive or negative) received from voters about the system. Voters are pleased with the new ballot layout and the use of ovals (we previously completed arrows). They also like the fact that they can make corrections to the ballot and their intent will be maintained during adjudication.

Do you feel like you have gotten your money's worth for the system? Yes.

Would you recommend this system for use in other jurisdictions? Yes.

U. S. ELECTION ASSISTANCE COMMISSION
VOTING SYSTEM TESTING AND CERTIFICATION PROGRAM
1335 East West Highway, Suite 4300
Silver Spring, MD 20910

April 13, 2020   **Sent via e-mail**

Ian Piper
Dominion Voting Systems
1201 18th Street, Suite 210
Denver, CO 80202

Re: ECO 100630

Dear Mr. Piper,

This correspondence is to inform you that DVS ECO 100630 is approved.

Sincerely,

Jerome Lovato
Director, Voting System Testing and Certification

Cc: Pro V&V