Idaho Certified Voting Systems
As of October 1, 2015

Descriptions of Certified Voting Systems on page 11.

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
Hart InterCivic	Hart InterCivic Verity 1.0 Voting System	Verity Build 1.0.3 Verity Central 1.0.3 Verity Count 1.0.3 Verity User Management software Verity Election Management software	Verity Scan 1.0.3 Revision B Verity Touch Writer 1.0.3 Revision B Verity Device Microcontroller V17 Verity vDrive – USB data transfer Verity Key – Security Kodak i5600 Scanner - Central Canon DR-G1100 Scanner - Central Canon DR-G1130 Scanner - Central	EAC Certification Number HRT-Verity-1.0 2005 VVSG	EAC Certification May 12, 2015	September 30, 2015
Hart InterCivic	Hart InterCivic Voting System 6.2.1	Boss 4.3.13, Ballot Now 3.3.12, Servo, 4.2.10, Tally 4.3.10, eCM Manager 1.1.7, Rally 2.3.7, The certification documents have been revised to include the incremented version of Ballot Now to 3.3.1.2 to enable recognizing the Canon DR-X10C scanner which requires the Windows 7 operating system.	eSlate, eSlate/DAU 4.2.1.3, eScan 1.3.14 (precinct count tabulator), JBC 4.3.1, VBO 1.8.3, Canon DR-X10C Scanner (central count scanner)	NASED Number N-1-04-22-22-006 (2002) 2002 VVS	NASED Certification August 7, 2006	October 8, 2014
ES&S	EVS5.2.0.0	ElectionWare v.4.6.0.0, Election Reporting Manger (ERM)	ExpressVote (Universal Voting Device) v.1.4.0.0, DS200 (Precinct Count Tabulator) v.2.12.0.0, DS850 (Central	EAC Certification Number	EAC Certification	August 13,

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
		v.8.11.0.0, Event Log Service v.1.5.5.0, Removable Media Service (RMS) v.1.4.5.0, Vat Previewer v.1.4.0.0, ExpressVote Previewer v.1.4.0.0.	Count Tabulator) v.2.10.0.0, AutoMARK (Voter Assist Terminal) v.1.8.6.0.	ESSEVS5200 2005 VVSG	7/2/2014	2014
ES&S	Unity 3.4.1.0.	Election Data Manager (EDM) v.7.8.2.0 ESS Image Manager (ESSIM) v.7.7.2.0 Hardware Programming Manager (HPM) v.5.9.0.0 Election Reporting Manager (ERM) v.7.9.0.0 AutoMARK Information Management System (AIMS) v.1.3.257 Audit Manager (AM) v.7.5.2.0 LogMonitor Service v.1.1.0.0 VAT Previewer v.1.3.2907	DS200 (Precinct Count Tabulator) v.1.7.0.0 DS850 (Central Count Tabulator) v.2.9.0.0 M100 (Precinct Count Tabulator) v.5.4.4.5 M650 (Central Count Tabulator) v.2.2.2.0 AutoMARK (Voter Assist Terminal) v.1.3.2907	EAC Certification Number: ESSUnity3410 2002 VVS	EAC Certification 4/4/2014	June 2, 2014
Hart InterCivic	Hart InterCivic Voting System 6.2.1	Boss 4.3.13, Ballot Now 3.3.11, Servo, 4.2.10, Tally 4.3.10, eCM Manager 1.1.7, Rally 2.3.7.	eSlate, eSlate/DAU 4.2.1.3, eScan 1.3.14 (precinct count tabulator), JBC 4.3.1, VBO 1.8.3, Canon DR-X10C Scanner (central count scanner)	NASED Number N-1-04-22-22-006 (2002) 2002 VVS	NASED Certification August 7, 2006	October 24, 2013
ES&S	EVS 5.0.0.0	ElectionWare v.	DS200 (Precinct Count Tabulator)	EAC Certification #	EAC	

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
		4.1.0.0, Election Reporting Manager v.8.6.0.0, Event Log Service v.1.5.0.0, Removable Media Service v.1.4.0.0 and VAT Previewer v.1.8.1.0.	v.2.7.0.0. Digital Scanner DS850 (Central Count Tabulator) v.2.4.0.0. Digital Scanner AutoMARK (Voter Assist Terminal) v.1.8.1.0.	ESSEVS5000 2005 VVSG	Certification 5/16/2013	October 2, 2013
ES&S	DS200 ECOs	N/A	Tested and de minimus Engineering Change Orders (ECOs).	N/A	N/A	September 4, 2013. Administrative certification of Engineering Change Orders (ECOs)
ES&S	Unity 3.4.0.0	Election Data Manager (EDM) v.7.8.1.0 ESS Image Manager (ESSIM) v.7.7.1.0 Hardware Programming Manager (HPM) v.5.8.0.0 Election Reporting Manager (ERM) v.7.8.0.0 AutoMARK Information Management System (AIMS) v.1.3.257 Audit Manager (AM) v.7.5.2.0 LogMonitor Service v.1.0.0.0	DS200 (Precinct Count Tabulator) v.1.6.1.0. Digital Scanner DS850 (Central Count Tabulator) v.2.2.0.0. Digital Scanner M100 (Precinct Count Tabulator) v.5.4.4.5. Optical Scanner M650 (Central Count Tabulator) v.2.2.2.0. Optical Scanner AutoMARK (Voter Assist Terminal) v.1.3.2907	EAC Certification # ESSUNITY3400 2002 VSS	EAC Certification 10/31/12	March 27, 2013

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
		VAT Previewer v.1.3.2907				
ES&S	AutoMARK Ballot Marking Device	N/A	Tested and de minimus Engineering Change Orders (ECOs).	N/A	N/A	August 24, 2012. Administrative certification of Engineering Change Orders (ECOs)
ES&S	M100 Precinct Tabulator, AutoMARK Ballot Marking Device	N?A	Tested and de minimus Engineering Change Orders (ECOs).	N/A	N/A	June 24, 2011. Administrative certification of Engineering Change Orders (ECOs)
ES&S	AutoMARK Ballot Marking Device	N/A	Tested and de minimus Engineering Change Orders (ECOs).	N/A	N/A	January 28, 2011. Administrative certification of Engineering Change Orders (ECOs)
ES&S	M650 Central and M100 Precinct Count Tabulators, AutoMARK Ballot Marking Device	N/A	Tested and de minimus Engineering Change Orders (ECOs).	N/A	N/A	July 20, 2009 Administrative certification of Engineering Change Orders (ECOs)
ES&S	M650 Central Count Tabulator	N/A	Hardware Revision 1.1 to 1.2	N/A	N/A	August 26, 2008 Administrative Certification of

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
						hardware changes independent from current certified firmware
ES&S	Unity 3.0.1.1	Audit Manger v. 7.3.0.0 Election Data Manager v.7.4.4.0 Ballot On Line 1.2.0.0 ES&S Image Manager v.7.4.2.0 iVotronic Image Manager v.2.0.1.0 Optech Image Manager v.4.0.0.0 Hardware Programming Manager v.5.2.4.0 Data Acquisition Manager v. 6.0.0.0 Election Reporting Manager v. 7.1.2.1 AutoMARK AIMS 1.2.18 (All Modules 2002)	iVotronic DRE Firmware v. 9.1.6.0 & 9.1.6.1 Model 100 Optical Scan Precinct Ballot Counter Firmware v. 5.2.1.0 Model 650 v. 2.1.0.0 AutoMARK Voter Assist Terminal (VAT) HW Rev 1.1 - Firmware v. 1.1.2258 AutoMARK Voter Assist Terminal (VAT) HW Rev 1.0 - Firmware v. 1.1.2258 Real-Time Audit Log Printer Compact Flash Multi-card Reader/Writer ***Model 150/550 v. 2.1.2.0 Optech IV-C v. 1.06a and 1.07a Eagle v. 1.50 APS, 1.28 HPS, 1.02 CPS Eagle v. 1.52 APS, 1.30 HPS, 1.08a CPS *** NOTE: while the components listed in red have been tested with the Unity 3.0.1.0, they represent 1990 qualified legacy systems and as such remain 1990 qualified. Use of these units should be based on state and local testing and state law.	N-2-02-22-22-006 (2002)	8/31/2006	April 1, 2008 Administrative Certification of Legacy Equipment with Unity 3.0.1.1
ES&S	AutoMARK 1.1 with Unity 3.0.1.1	Election Data Manager, (EDM) version 7.4.4.0. ES&S Image Manager, (ESSIM) version 7.4.2.0. Hardware Programming Manager, (HPM) version 5.2.4.0.	M100 version 5.2.1.0. Precinct optical scan tabulator M650 version 2.1.0.0. Green Light sensor Central count optical scan tabulator	N-2-02-22-22-006 (2002)	August 31, 2006	April 30, 2007

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
		Data Acquisition Manager (DAM), version 6.0.0.0. Election Reporting Manager (ERM), version 7.1.2.1. Audit Manager, version 7.3.0.0. AutoMark Information Management System, (AIMS) version 1.2.18. AutoMark Voter Assist Terminal, (VAT) version 1.1.2258	ES&S AutoMark Voting System Release 1.1.2258	N-2-16-22-22-002(2002)	August 31, 2006	
ES&S AutoMARK Technical Systems LLC	ES&S AutoMARK Voting System	ES&S Unity v. 2.5 AutoMARK AIMS 1.1.10	Model 100 Optical Scan Precinct Ballot Counter Firmware v. 5.1.0.0-Unity 2.5 Model 100 Optical Scan Precinct Ballot Counter. Firmware v. 5.2.0.0- Unity 2.5 Model 650 Red light sensor Optical Scan Central Counter v. 2.1.0.0	N-1-16-22-22-001 (2002)	10/24/2005	04/25/2006
ES&S	Unity 2.5	Audit Manager 7.3.0.0 Election Data Manager 7.3.0.0 ES&S Image Manager 7.3.0.0 Hardware Programming Manager 5.1.0.0 Data Acquisition Manager 6.0.0.0 Election Reporting Manager 7.0.0.0	Model 650 Central Ballot Scanner Firmware release 2.0.1.0 Model 100 Precinct Ballot Counter Firmware release 5.1.0.0	N-1-02-22-22-003 (2002)	10/19/2004 11/11/2004 1/9/2005	06/24/2005

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
ES&S. In partnership with AutoMARK Technical Systems LLC	ES&S AutoMARK Voting System Release 1.0	ES&S Unity v. 2.4.3 AutoMARK AIMS 1.09 (2002)	Model 100 Optical Scan Precinct Ballot Counter Firmware v. 5.0.0.0 Model 150/550 v. 2.1.1.0 Model 650 v. 1.2.0.0 Optech Eagle v. 1.50 APS, v. 1.28 HPS, CPS v. 1.02/C1.04 AutoMARK Voter Assist Terminal (VAT) v. 1.0 (2002)	N-2-14-22-12-001 (1990)	6/1/2005	06/24/2005
ES&S	Unity 2.4.3	(*changes from 2.4.2*) Program Manager v. 5.0.3.0 Data Acquisition Manager v. 5.0.3.1 Election Reporting Manager v. 6.4.3.0	Model 100 Optical Scan Precinct Ballot Counter Firmware v. 5.0.0.0 Model 150/550 v. 2.1.1.0 Model 650 v. 1.2.0.0 Optech IV-C v. 1.06a and 1.07a* Eagle v. 1.50 APS, v. 1.28 HPS, CPS v. 1.02/C1.04	N-1-02-21-21-002 (1990)	8-27-04	06/24/2005

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
ES&S	Unity 2.4.2	Election Data Manager v. 7.2.1.0, Audit Manager v.7.0.2.0, Optech Image Manager 3.2.0.0, ESS Image Manager v. 7.2.0.0, Ballot On Line v. 1.0.0.0, Hardware, Programming Manager v. 5.0.2.0, Data Acquisition Manager v. 5.0.3.0, Election Reporting Manager v. 6.4.2.0	Model 100 Optical Scan Precinct Ballot Counter Firmware v. 5.0.0.0 Model 150/550 v. 2.1.0.0 Model 650 v. 1.2.0.0 Optech IV-C v. 1.06a and 1.07a* Eagle v. 1.50 APS, v. 1.28 HPS, CPS v. 1.02/C1.04	N-1-02-12-11-001 (1990)	2/19/2004	06/24/2005
ES&S. Formerly AIS American Information Systems	AIS model 100 Vote Tally Visible light reader		Precinct count optical scan reader.			05/13/2002
ES&S. Formerly AIS American Information Systems	AIS 550 AIS 150	Unity 2.4.3 (1990)	Central count & Precinct count optical scan readers. Models 315 and 115 0riginally certified in 1991 upgraded to models 150 and 550 – v. 2.1.1.0			04/13/1991
ES&S. Formerly Business Records Corporation (BRC)	Election Tabulation Program	E.T.P Election Tabulation Program				11/24/1986

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
ES&S. Formerly Computer Election Systems. (BRC)	Votomatic Punch Card Ballot System					03/17/1971
Kenneth P. Hazlett	Punch Card Election Tabulation Network ETNet	ETNet	P.C., card reader and printer.			02/29/1988
Sequoia	EMS/AERO version 3.54.1	EMS/AERO version 3.54.1 Optech Ballot Wizard version 1.0 (2002) MPR version 2.15	Optech 3P Eagle APS.H1.52.980428.1040 CPS.H1.08A.980428.1150 HPS.D/H1.30.980428.1130 Optech Insight APX K2.06.021108.1600 CPX.J/K1.12.020412.1100 HPX.K/K1.40.021030.1110 Optech 400-C Ballot Counter WinETP 1.10.5 Memory Pack Receiver v. 2.15 (2002)	N-1-07-12-12-001 (1990)	2/1/2005	07/07/2005
Sequoia	WinEDS version 3.0.134	WinEDS version 3.0.134 (2002)	Sequoia 400C /WinETP 1.10.5 Sequoia AVC Edge Model II version 4.3.320 w. VeriVote Printer# Sequoia AVC Edge Model I version 4.3.320 Card Activator v. 4.3.320	N-1-07-22-11-007 (1990)	5/19/2005	06/24/2005
Sequoia. Formerly BRC Business	OPTECH IV-C 200		Arrow optical scan reader			01/24/1992

Vendor	Voting System/System Component	Software	Hardware/Firmware	System ID #/ Qualified to 1990, 2002 or 2005 Standards	Final Report Date	Idaho Certification Date
Records Corporation						
Sequoia. Arrow Ballots. Formerly Business Records Corporation (BRC)	OPTECH IV-C 400 OPTECH III-P Eagle	Unity 2.4.3 (1990)	Central count & Precinct count Arrow optical scan readers. IV-C – v 1.06a/1.07a Eagle – v. 1.28/1.5			09/06/1990
			# Edge Version 4.3.320 includes a configuration in which the serial number of the voting machine has been removed from all hardcopy output generated by the VeriVote printer in order to ensure the secrecy of the ballot in jurisdictions where more than one machine is used. NASED. The Optech systems tested and identified under this release are legacy systems/releases not independently qualified under ITA testing. Use of these units should be based on state and local testing. NASED.			

Descriptions of Certified Voting Systems:

September 30, 2015   Hart InterCivic Verity 1.0 Voting System

The Verity 1.0 voting system is certified for the following consumer off the shelf (COTS) scanners: Kodak i5600 Scanner, Canon DR-G1100 Scanner, and Canon DR-G1130 Scanner. Any material changes or upgrades to the scanners will require re-certification with the Election Assistance Commission (EAC) and the State of Idaho.

Verity Build 1.0.3 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 and Verity Touch Writer. After generating election definitions, Verity Build can also print ballots or output them electronically, for third-party printers.

Verity Central 1.0.3 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). Verity 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 Verity 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 1.0.3 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 devices. Once the CVRs have been read and tabulated, Count can produce a variety of standard and customized reports. Verity Count also allows officials to adjudicate write-in votes from Verity Scan or Verity 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 election definitions in the Verity system.

Verity Scan 1.0.3 Revision B 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 simply 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, blank ballots, and invalid cross-party votes in a primary election, and they can also specify whether voters are required to have poll worker assistance to cast a mismarked ballot, or not. 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 Scan is capable of printing reports with ballot count totals or unofficial Tally results in the polling place. Verity Scan includes a compact and durable integrated storage case, for secure, easy transportation and storage.

Verity Touch Writer 1.0.3 Revision B is a ballot marking device for paper ballots. Touch Writer's electronic interface is paired with a commercial-off-the-shelf (COTS) printer, so that voters can mark selections electronically, review their selections, and then print a marked ballot that is the same format as ballots produced for voters who hand-mark their ballots. Because Verity Touch Writer prints a complete ballot from blank stock, including voter selections, it provides true equality of access for all voters. Poll workers perform a minimal number of steps to open the polls and activate the Verity Touch Writer device so that it is ready to receive a voter's activation code; this allows voters to activate their ballot session by entering an anonymous Access Code, privately. The removable vDrive election media on Verity Touch Writer allows its audit logs to be transferred to the Verity Count workstation for review. It is important to note that Touch Writer is a ballot marking device only, and as such it does not store electronic cast vote records, nor does it produce reports with results totals. Ballots marked with Verity Touch Writer are cast by inserting them into a Verity Scan device. Like Verity Scan, Touch Writer includes a compact and durable integrated storage case, for secure, easy transportation and storage.

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, in order to provide additional options for accessible voting. Access has three tactile buttons, one audio port, and one port for two-switch adaptive devices (such as "jelly switches" or sip-and-puff devices). 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 Verity 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 Verity Ballot Box, the specially designed voting booth for Verity Touch Writer 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. The Verity voting booth is 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 Build to Verity devices, including Scan and

Touch Writer. vDrives also store Cast Vote Records (CVRs) and audit information. After polls are closed, vDrives can be removed from Scan or Touch Writer to transfer CVRs and/or audit logs to Verity Count. vDrives are also used to store CVRs associated with scanned ballots in Verity Central. vDrives from 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.

October 8, 2014   Hart InterCivic Voting System (HVS) 6.2.1

Boss 4.3.13, Ballot Now 3.3.12, Servo, 4.2.10, Tally 4.3.10, eCM Manager 1.1.7, Rally 2.3.7.

The certification documents have been revised to include the incremented version of Ballot Now to 3.3.1.2 to enable recognizing the Canon DR-X10C scanner which requires the Windows 7 operating system.

June 2, 2014 Election Systems and Software Unity 3.4.1.0

ES&S made a formal request for administrative certification of Unity 3.4.1.0, a modification of previously certified Unity 3.4.0.0, to enable software to run on windows 7 operating systems and replace end of life parts manufactured for the DS200 precinct scanner. Unity 3.4.1.0 passed testing at Wyle Laboratories and received EAC certification number ESSUnity3410. As the modification did not effect the accuracy, efficiency or capacity of the voting system, administrative certification was granted June 2, 2014.

October 24, 2013   Hart InterCivic Voting System (HVS) 6.2.1

System Software

The Hart (HVS) 6.2.1 is a proprietary software suite which includes election management and precinct and central count voting system components comprised of Hart proprietary and third-party commercial off-the-shelf (COTS) hardware and associated firmware.

The components support the use of both paper-based and direct recording electronic (DRE) voting systems and devices, including those that are fully accessible in compliance with the Americans with Disability Act (ADA) and HAVA. The suite of voting methods provides central and precinct tabulation with reporting and auditing capabilities.

The system is certified to the 2002 Voting System Standards (VSS). The original system was certified with Windows 2000 and with additional administrative certification to Windows 2007 except for the SERVO application which requires a separate computer running Window 2000.

Ballot Origination Software System (BOSS) is the software application that enables users to define a database for each election containing jurisdiction specific paper and electronic ballot styles in all requisite languages. Once the election specific data set has been generated, BOSS is also used to produce PCMCIA memory cards called Mobile Ballot Boxes (MBBs) containing the election data for use in voting systems and audio files for use in accessible voting devices.

Ballot Now is the paper ballot management software application used to print and process paper ballots. By using an election-specific MBB a Ballot Now election database is created from which ballots can be printed on demand in-house, or ballot files can be created for printing by a third party vendor. Ballot Now is also used to process voted paper ballots using a digital commercial off the shelf (COTS) document scanner to create and store a digital image of the ballot in the Ballot Now election database. When appropriate, the digital image can then be viewed on-screen to identify and resolve voter intent issues and manage write-in candidates electronically. Once all ballots are resolved, Ballot Now processes and saves Cast Vote Records to the MBB. Ballot Now has *no* tabulation capability, as the MBB is processed with a separate proprietary tabulation software application.

Tally- is the software application that reads, accumulates and tabulates Cast Vote Records stored on MBBs by voting devices and Ballot Now systems used in an election. Tally also provides fast and accurate election results reporting.

Rally- is the software application that can be used to read MBBs and electronically transfer Cast Vote Records via secure modem or network connection from remote accumulation stations to the central tabulation system for rapid reporting of unofficial results. Rally can also be connected with Tally via LAN in the central count facility to provide simultaneous, expedited reading and upload of MBB Cast Vote Record data.

System for Election Records and Verification of Operations (SERVO) is the HVS software application used for voting device election records archiving and asset management. SERVO maintains ongoing equipment history, provides for secure backup of election data, and offers features and reports to manage and conduct recounts and audits.

eCM Manager- is the software application used to create digitally encrypted security files, which are then written to an eSlate Cryptographic Module (eCM) token. An eCM token is a physical universal serial bus (USB) security device required to be physically present to supply the secure encrypted signing key necessary for access to perform certain functions in the HVS election management and tabulation software applications.

System Hardware

Direct Record Electronic (DRE) Components

Judges Booth Controller (JBC) is the polling place control console that manages up to 12 eSlate/DAU DRE voting units. Using election data from the Mobile Ballot Box (MBB), the JBC delivers to the individual eSlate units the information necessary to display precinct-specific electronic ballots to voters. The JBC prints random four-digit Access Codes to regulate voters' ability to access and vote the correct electronic ballot.

eSlate is a secure DRE voting device with a flexible ballot presentation and integrated selector for voters to view, vote and record choices on electronic ballots. The lower portion of the eSlate includes a set of distinctly shaped control buttons and the SELECT Wheel™ interface that allows voters to highlight their selection in a contest and then press an "Enter" button to confirm and record their choice. The eSlate features a durable polycarbonate covered "tough-screen" display and user-friendly interface.

Disabled Access Unit (DAU) is the HAVA compliant eSlate DRE equipped for accessibility and is ADA accessible by design. An eSlate can be upgraded to a DAU to accommodate various personal assistive devices including dual-input jelly switches and "sip and puff" devices (used by physically challenged voters to cast their ballot using only their breath). The audio ballot reader is a feature used to support voters with visual impairments or literacy challenges.

Verified Ballot Option (VBO) available in some states is the printer connected to the eSlate/DAU to provide a secure, voter verifiable paper audit trail (VVPAT). The printer, located inside the voting booth, prints a paper summary of the ballot choices for the voter to review. This paper record of the every ballot cast through the eSlate voting unit serves as an additional audit trail.

Accessibility Features for the voting devices are designed to be easy-to-use. Strict design standards were used to ensure access for visually impaired, hearing impaired, or physically challenged voters. Key features incorporated into the HAVA / ADA compliant DAU eSlate electronic voting device include:

Special interfaces for the physically challenged including dual-input or "Jelly" switches and "sip and puff" switches (that allow severely physically impaired voters to cast their ballot using only their breath). An audio ballot reader to support visually impaired voters, including audible signals that provide confirmation with each selection; and a simple navigation method that is modeled after systems commonly used by the disabled. All accessibility features can be used interchangeably, in whole or part, with the HVS 6.2.1 standard interfaces, allowing the voter to vote independently and privately.

eScan is a self-contained paper ballot voting terminal with a single-feed digital scanner which transports and scans both sides of the ballot simultaneously. The eScan is designed for use in polling places and/or a central count environment. Fully integrated with the other components of the Hart Voting System, the eScan uses paper ballots produced by the Ballot Now application. Like the JBC/eSlate DRE system, the eScan stores Cast Vote Records on MBB flash memory cards. The eScan sits on a base that provides for secure ballot storage and transport. Ballots rejected by the eScan (e.g., under voted, over voted and/or blank ballots) are returned to the voter with visual (display) indication of the issue detected by the scanner, thereby meeting the requirement for "second chance" voting.

The system uses the Canon DR-X10C to scan paper ballots before tabulation in the Tally software.

October 2, 2013   Election Systems and Software EVS 5.0.0.0 Voting System

System Software

The EVS 5.0.0.0 Voting System EMS is an application suite comprised of five components: ElectionWare, Election Reporting Manager (ERM), Removable Media Service (RMS), ES&S Event Logging Service (UELS), and VAT Previewer.

ElectionWare

ElectionWare integrates the election administration functionality into a unified application. Its intended use is to define an election and create the resultant media files used by the DS200 tabulator, AutoMARK Voter Assist Terminal (VAT), the DS850 Central Ballot Scanner, and Election Reporting Manager (ERM). An integrated ballot viewer allows election officials to view the scanned ballot and captured ballot data side-by-side and produce ballot reports.

Election Reporting Manager (ERM)

Election Reporting Manager (ERM) generates paper and electronic reports for election workers, candidates, and the media. Jurisdictions can use a separate ERM installation to display updated election totals on a monitor as ballot data is tabulated, and send the results' reports directly to the media outlets.

ERM supports accumulation and combination of ballot results data from all ES&S tabulators. Precinct and accumulated total reports provide a means to accommodate candidate and media requests for totals and are available upon demand. High-speed printers are configured as part of the system accumulation/reporting stations PC and related software.

Removable Media Service (RMS)

Removable Media Service (RMS) is an application that runs in the background of the EMS client workstation and supports the insertion and removal of election and results USB media.

ES&S Event Logging Service (UELS)

ES&S Event Logging Service leverages the Windows Event Viewer, included with a standard Windows installation, to audit user interactions with the ES&S Election Management System.

VAT Previewer

The VAT Previewer is an application within the EMS program that allows the user to preview audio text and screen layout prior to burning Election Day media for the AutoMARK.

System Hardware

Precinct Ballot Tabulator: DS200

The precinct ballot tabulator component is the DS200. The DS200 is a digital scan paper ballot tabulator designed for use at the polling place level. After the voter marks a paper ballot, their ballot is inserted into the unit and immediately tabulated. The tabulator uses a high-resolution image-scanning device to image the front and back of the ballot simultaneously. The resulting ballot images are then processed by a proprietary mark recognition engine.

The system includes a 12-inch touch screen display providing voter feedback and poll worker messaging. Once a ballot is tabulated and the system creates cast vote records, the ballot is dropped into an integrated ballot box. The DS200 includes an internal thermal printer for the printing of the zero reports, log reports, and polling place totals upon the official closing of the polls.

Central Count Tabulator: DS850

The DS850 is a high-speed, digital scan central ballot counter. During scanning, the DS850 prints a continuous audit log to a dedicated audit log printer and can print results directly from the scanner to a second connected printer. The scanner saves results internally and to results collection media that officials can use to format and print results from a PC running Election Reporting Manager. The DS850 has an optimum throughput rate of 300 ballots per minute and uses cameras and imaging algorithms to image the front and back of a ballot, evaluate the results and sort ballots into discrete bins to maintain continuous scanning.

Electronic Ballot Marking Device: AutoMARKTM Voter Assist Terminal (VAT)

The electronic ballot marking device component is the ES&S AutoMARK™ Voter Assist Terminal (VAT). The AutoMARK™ VAT assists voters with disabilities by marking optical scan ballots.

The AutoMARK™ VAT includes two user interfaces to accommodate voters who are visually or physically impaired or voters who are more comfortable reading or hearing instructions and choices in an alternative language. The AutoMARK™ is equipped with a touch-screen and keypad. The touch-screen interface includes various colors and effects to prompt and guide the voter through the ballot marking process. Each key has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use.

Regardless whether the voter uses the touch-screen or other audio interface, changes can be made throughout the voting process by navigating back to the appropriate screen and selecting the change or altering selections at the mandatory vote summary screen that closes the ballot-marking session.

The AI00, A200 and A300 all operate the same and have the same features. The difference between the models is the location of two printed circuit boards and related wiring harness and cables. In the A200, the Printer Engine Board and Power Supply Board were moved from under the machine to the top. The A300 has a different lock and label. Since this change is so minor, the A300 equipment was only tested in the Accuracy and System Integration Tests. Therefore, the A300 is included in the recommendation for certification.

September 4, 2013   Election Systems and Software DS200 Engineering Change Orders (ECOs).

ES&S made a formal request for an administrative certification for the above engineering change orders (ECOs). After review of the required documents on file with the Secretary of State including formal application for administrative certification, and Independent Testing Reports from Wyle Laboratories, and as the engineering change orders specified do not impair accuracy, efficiency or capacity of the systems and does not require a new NASED number, the engineering change orders (ECOs) specified below are certified for use in Idaho as of September 4, 2013.

ES&S ECO #s: 1158, 1160, 1281, 1346, 1398, 1400.

March 27, 2012   Election Systems and Software Unity 3.4.0.0 Voting System

System Software: The Unity 3.4.0.0 Election Management System is an application suite comprised of eight components: AutoMark Information Management System, Audit Manager, Election Data Manager, ES&S Ballot Image Manager, Hardware Programming Manager, Election Reporting Manager, LogMonitor Service, and VAT Previewer.

AutoMark Information Management System (AIMS).AIMS is a windows-based election management system software application used to define election parameters for the VAT, including functionality to import election definition files produced by the Unity EMS and create VAT flash memory cards.

VAT Previewer. The VAT Previewer is an application within the AIMS program that allows the user to preview audio text and screen layout prior to downloading election-day media for the AutoMARK.

Audit Manager (AM). The Audit Manager (AM) utility provides security and user tracking for Election Data Manager and ES&S Ballot Image Manager. Audit Manager runs in the background of the other Unity programs and provides password security and a real-time audit log of all user inputs and system outputs. Election coders use Audit Manager to set Unity system passwords and track user activity.

Election Data Manager (EDM). The Election Data Manager (EDM) is the entry point for the Unity Election Management System. Election Data Manager is a single-entry database that stores precinct, office, and candidate information. Data entered for an initial election is stored to a re-useable database to be recalled and edited for all elections that follow. Election Data Manager is used in conjunction with other Unity software to format and print ballots, program ballot scanning equipment, and produce Election Day reports.

ES&S Ballot Image Manager (ESSIM). The ES&S Ballot Image Manager (ESSIM) uses ballot style information created by Unity Election Data Manager to display the ballots in a WYSIWIG design interface. Users can apply typographic formatting (font, size, attributes, etc.) to individual components of the ballot. Text and graphic frames can also be added to the ballot.

Hardware Programming Manager (HPM).
The Hardware Programming Manager (HPM) uses the election specific database created with Election Data Manager and ES&S Ballot Image Manager to program the appropriate media for ES&S tabulation devices. Hardware Programming Manager converts the ballot layout data into the format required for each ES&S tabulator. HPM then writes this data to the appropriate media required; a USB flash drive for the DS200 and DS850, a PCMCIA card for the Model 100, a CFcard for the AutoMark or a Zip disk for Model 650 tabulators.

Election Reporting Manager (ERM). Election Reporting Manager (ERM) generates paper and electronic reports for election workers, candidates, and the media. Jurisdictions can use a separate ERM installation to display updated election totals on a monitor as ballot data is tabulated, and send results reports directly to media outlets. ERM supports accumulation and combination of ballot results data from all ES&S tabulators. Precinct and accumulated totals reports provide a means to accommodate candidate and media requests for totals and are available upon demand. High-speed printers are configured as part of the system accumulation/reporting stations - PC and related software.

LogMonitor Service. The LogMonitor Service is a Windows Service that runs in the background of any active ES&S

Election Management software application to monitor the proper functioning of the Windows EventViewer. The LogMonitor Service closes any active ES&S software application if the system detects the improper deactivation of the Windows Event Viewer.

Precinct Ballot Tabulator: Model 100
The Model 100 is a precinct-based, voter-activated paper ballot tabulator that uses Intelligent Mark Recognition (IMR) visible light scanning technology to detect completed ballot targets. The Model 100 is designed to alert voters of overvotes, undervotes and blank ballots. It accepts ballots inserted in any orientation. Once the ballot is scanned by the Model 100, it is passed to the integrated ballot box.

Precinct Ballot Tabulator: DS200
The DS200 is a digital scan paper ballot tabulator designed for use at the polling place level. After the voter marks a paper ballot, their ballot is inserted into the unit and immediately tabulated. The tabulator uses a high-resolution image-scanning device to image the front and rear of the ballot simultaneously. The resulting ballot images are then decoded by a proprietary recognition engine. The system includes a 12-inch touch screen display providing voter feedback and poll worker messaging. Once a ballot is tabulated and the system updates internal vote counters, the ballot is dropped into an integrated ballot box. The DS200 includes an internal thermal printer for the printing of the zero reports, log reports, and polling place totals upon the official closing of the polls.

Central Count Tabulator: Model 650
The Model 650 is a high-speed, optical scan central ballot counter. During scanning, the Model 650 prints a continuous audit log to a dedicated printer and can print results directly from the scanner to another printer. The M650 can transfer results to a Zip Disk that officials use to generate results using Election Reporting Manager. The M650 is capable of sorting write-ins, blanks, overvotes and illegal ballots.

Central Count Tabulator: DS850
The DS850 is a high-speed, digital scan central ballot counter. During scanning, the DS850 prints a continuous audit log to a dedicated audit log printer and can print results directly from the scanner to a second connected printer. The scanner saves results internally and to results collection media that officials can use to format and print results from a PC running Election

Reporting Manager. The DS850 has an optimum throughput rate of 200 ballots per minute and uses cameras and imaging algorithms to image the front and back of a ballot, evaluate the results and sort ballots into discrete bins to maintain continuous scanning.

Electronic Ballot Marking Device: AutoMARK Voter Assist Terminal (VAT)
The electronic ballot marking device component is the ES&S AutoMARK Voter Assist Terminal (VAT). The AutoMARK VAT assists voters with disabilities by marking optical scan ballots. The AutoMARK VAT includes two user interfaces, to accommodate voters who are visually or physically impaired or voters who are more comfortable reading or hearing instructions and choices in an alternative language. The AutoMARK is equipped with a touch screen and keypad. The touch screen interface includes various colors and effects to prompt and guide the voter through the ballot marking process. Each key has both Braille and printed text labels designed to indicate function and a related shape to help the voter determine its use. Regardless whether the voter uses the touch screen or other audio interface, changes can be made throughout the voting process by navigating back to the appropriate screen and selecting the change or altering selections at the mandatory vote summary screen that closes the ballot marking session. The A100 and A200 both operate the same and have the same features. The difference between the models is the location of two printed circuit boards and related wiring harness and cables. In the A200, the Printer Engine Board and Power Supply Board were moved from under the machine to the top.

January 28, 2011   Election Systems and Software AutoMARK ballot marking device Engineering Change Orders (ECOs).

ES&S made a formal request for an administrative certification for the above engineering change orders (ECOs). After review of the required documents on file with the Secretary of State including formal application for administrative certification, and Independent Testing Reports from Wyle Laboratories, and as the engineering change orders specified do not impair accuracy, efficiency or capacity of the systems and does not require a new NASED number, the engineering change orders (ECOs) specified below are certified for use in Idaho as of August 24, 2012.

ES&S ECO #s: 875, 876, 878

June 24, 2011   Election Systems and Software Model 100 Precinct Tabulator and AutoMARK ballot marking device Engineering Change Orders (ECOs).

ES&S made a formal request for an administrative certification for the above engineering change orders (ECOs). After review of the required documents on file with the Secretary of State including formal application for administrative certification, and Independent Testing Reports from Wyle Labs, and as the engineering change orders specified do not impair accuracy, efficiency or capacity of the systems and does not require a new NASED number, the engineering change orders (ECOs) specified below are certified for use in Idaho as of June 24, 2011.

ES&S Model 100 Precinct Tabulator: ES&S ECO #s: 858, 860, 865.

ES&S AutoMARK: ES&S ECO #s: 861.

January 28, 2011   Election Systems and Software AutoMARK ballot marking device Engineering Change Orders (ECOs).

ES&S made a formal request for an administrative certification for the above engineering change orders (ECOs). After review of the required documents on file with the Secretary of State including formal application for administrative certification, and Independent Testing Reports from SysTest Labs and iBeta Quality Assurance, and as the engineering change orders specified do not impair accuracy, efficiency or capacity of the systems and does not require a new NASED number, the engineering change orders (ECOs) specified below are certified for use in Idaho as of January 28, 2011.

ES&S AutoMARK, model numbers A100, A200, and A300.

ATS ECR #s: 300,303,305,307,323,326,327,328,329,330,341,354,355,356,364.

ES&S ECO #s: 729, 752, 759, 760, 761, 762, 764, 765, 766, 767,768, 769, 770, 771, 772, 773, 774, 776, 777, 778, 779, 780, 781, 782.

July 20, 2009   Election Systems and Software M650 central count tabulator, M100 precinct count tabulator and AutoMARK ballot marking device Engineering Change Orders (ECOs).

ES&S made a formal request for an administrative certification for the above engineering change orders (ECOs). After review of the required documents on file with the Secretary of State including formal application for administrative certification, and Independent Testing Reports from SysTest Labs, and as the engineering change orders specified do not impair accuracy, efficiency or capacity of the systems and does not require a new NASED number, the engineering change orders (ECOs) specified below are certified for use in Idaho as of July 20, 2009.

ES&S M650 Engineering Change Orders: #667, #669, #677, #827

ES&S M100 Engineering Change Orders: #672, #679, #683, #685, #721, #732, #775, #000042, #000063, #000068, #000057, #00083. #000151, #000154, #000155, #000156, #000157, #000158, #000159, #000160, #000164, #000182, #000185.

ES&S AutoMARK Engineering Change Orders: #790, #794, #799, #810, #823.

August 26, 2008   Election Systems and Software M650 central count tabulator Hardware Revision 1.1 to 1.2.

ES&S made a formal request for an administrative certification for the above hardware revision. After review of the required documents on file with the Secretary of State including formal application for administrative certification, Engineering Change Orders, and Independent Testing Reports from SysTest Labs, and as the hardware changes specified are independent from the current certified firmware for the state of Idaho and does not require a new NASED number, the above mentioned system is certified for use in Idaho as of August 26, 2008.

Modifications, Hardware Revision 1.2, made to the hardware on the ES&S Model 650 central tabulator ("M650") are specified below:

Change of compact flash memory card, due to end of life of SanDisk brand.
Change of peripheral printer, due to end of life.
Change of Pick Motor Solenoid board, to improve static discharge levels.
Change of UPS, due to availability.
Change of label to meet 2005 VVSG standards.

April 1, 2008   Election Systems and Software **Unity 3.0.1.1 with Legacy Equipment: M150 Tabulator, Eagle Tabulator, the Optech IVC Tabulator and the Optech Image Manager.**

ES&S made a formal request for an administrative certification for the above listed legacy equipment with already certified Unity 3.0.1.1. This upgrade reduces the number of false positives encountered when the tabulators check for marginal marks. This upgrade also allows ballots and coding for the legacy equipment to utilize the same Unity version as all other optical scan counties in the state.

April 30, 2007   Election Systems and Software **Unity 3.0.1.1 with AutoMARK 1.1 optical scan voting system.**

The **ES&S M650 2.1** is a central count optical scan tabulator that utilizes paper optical scan ballots marked by filling in an oval to indicate the voter's choices. Mark detection capabilities have been improved on the M650 with the latest upgrades. The primary modification was a change to the type of light source that is used to illuminate the ballot during scanning. The new sensors in the M650 employ a green light. This new light source provides an improved response to various types of marking devices including ballpoint pen inks and pencils. The system also improves scanner performance and reduces errors that may be caused by voter hesitation marks on a ballot, folds, dirt smudges and other ballot anomalies. Totals are saved on a zip disk which is removed from the unit and inserted in a reader for import into a laptop computer where results are combined and reported utilizing the Unity Data Acquisition Manager (DAM), and the Election Reporting Manager (ERM).

The **ES&S M100 5.2.1.0** is a precinct based optical scan tabulator that utilizes paper optical scan ballots marked by filling in an oval to indicate the voter's choices. The voter is immediately notified by an electronic sound that they have over voted or under voted thus providing an opportunity to review and correct their ballot before tabulation. Precinct tabulation is accomplished by the M100 and saved on three redundant PCMCI memory cards. One card is transported to the county counting center and precinct totals are combined with other precincts utilizing the Unity Data Acquisition Manager (DAM), and reported through the Election Reporting Manager (ERM).

The **AutoMARK 1.1** voter assist terminal is a ballot marking device, no votes are stored in the machine. The marking device is used to meet the accessibility requirements of the Help America Vote Act for the blind and visually impaired. The voter uses a touch screen or Braille keypad with an audio ballot to indicate their choices. A review screen provides the voter an opportunity to review their ballot before the ballot is marked. The AutoMARK utilizes optical scan ballots identical to ballots used in counties using optical scan paper based systems. AutoMARK ballots may be tabulated on any optical scan tabulator certified for use in the State of Idaho. AutoMARK ballots are hand counted in counties using paper ballots. Counties that use punch card ballots also count AutoMARK ballots by hand and add totals into their accumulation and results programs. The firmware upgrade included in this version of the AutoMARK relaxes scanner tolerances to minimize "print on one side" errors and improve scanner recognition if the ballot is skewed when inserted into the device.

Unity 3.0.1.1 is a suite of software products that integrates an election data base program (Election Data Manager, EDM), a graphics program for ballot design (ES&S Image Manager, ESSIM), an election coding program (Hardware Programming Manager, HPM), a program for accumulation (Data Acquisition Manger, DAM), a reporting program (Election Reporting Manager ERM), an audit program (Audit Manager), and a program that produces machine coding and audio ballot coding for the AutoMARK, (AutoMARK Information Management System AIMS). There were no upgrades to **Unity On-Line**, a limited on-line version of this suite of products.

April 25, 2006   Election Systems and Software in partnership with AutoMARK Technical Systems LLC.
                        ES&S AutoMARK Voting System
                        AutoMARK AIMS 1.1.10

AIMS v. 1.1.10, an upgrade from AIMS v. 1.09, provides for a seamless import interface in the election coding process from Unity suite 2.5. N-1-16-22-22-001 (2002).

June 24, 2005   Election Systems and Software.
                        Unity 2.5

Software for use with the Model 650 central count tabulator and the Model 100 precinct ballot counter.

June 24, 2005   Election Systems and Software in partnership with AutoMARK Technical Systems LLC.

AutoMARK Voting System.
Unity v. 2.4.3 software.
Aims 1.09 software.

The AutoMARK is a ballot marking device. Votes are not stored in the machine. The voter inserts an optical scan ballot into the device and makes selections on a touch screen. The device meets the requirement for a voter verifiable paper audit trail. The device is accessible to the persons with disabilities. Over voting is prevented. A review screen offers the voter the opportunity to change their vote before casting the ballot. When the voter casts the ballot, the AutoMARK marks the optical scan ballot. The voter may again review the ballot for correctness when it removed from the device.

The optical scan ballot can be counted by hand. On the precinct level ballots can be counted by a Model 100 tabulator, the older Model 150, a legacy machine, or the Optech Eagle, also a legacy machine. Ballots can be tabulated on the Model 650 central count tabulator or the older Model 550 central count tabulator, also a legacy device at this date. The precinct and central count tabulators can also be used for standard optical scan ballots.

June 24, 2005   Election Systems and Software.
                         Unity 2.4.3 software.

Software for use with the Model 100 optical scan precinct counter and the Model 650 central count tabulator, the Optech IV-C central count tabulator and the Eagle III-P precinct count tabulator.

June 24, 2005   Election Systems and Software.
                         Unity 2.4.2 software.

Software for use with the Model 100 and 150 precinct counters, the 550 and 650 central count tabulators, the Optech IV-C central count tabulator and the Eagle III-P precinct count tabulator.

May 13, 2002   Election Systems and Software.
                        AIS Model 100 Vote Tally System. Formerly owned by American Information Systems (AIS).
                        Oval optical scan.

The "AIS 100" is a precinct-based, voter-activated paper ballot counter and vote tabulator. Utilizing advanced Intelligent Mark Recognition (IMR) visible light scanning technology, the Model 100 is for jurisdictions utilizing precinct level voting and tabulation.

March 13, 1991   Election Systems and Software.
                        AIS 315 upgraded to the 550 Formerly owned by American Information Systems (AIS).
                        AIS 115 upgraded to the 150
                        Oval optical Scan

The "AIS-315" (upgraded to the "550") and the "AIS-115" (upgraded to the "150") are classified as Centralized voting systems using high-speed optical mark readers in counting centers to process paper ballots. The "550" weighs approximately 290 lb. and the "150" approximately 200 lb. The "550" overall dimensions are 54 inches long, 26 inches high, and 29 inches deep with the dimensions of the "150" being slightly smaller. Both the "550" and the "150" can be operated in a normal office environment with electrical services of 180 to 120 Volts AC power (10 amps per machine). An "electronic program board" is pre-programmed in accordance with specific parameters for each election. The program board is available only through A.I.S.

November 24, 1986.   Election Systems and Software.
                        E.T.P., Punch Card Election Tabulation Program. Formerly owned by Business Records Corporation (BRC).

The E.T.P. is designed to count punch card ballots utilizing various formats including the 228 position votamatic card used in Idaho. The system consists of the IBM personal computer AT, XT or PC, a monitor, a card reader, a printer and ballot tabulation software. Since initial certification, Business Records Corporation's own GS/2 product offering has also been approved for use with the system instead of the IBM variables.

March 17, 1971.   Election Systems and Software.

                        "Votomatic" Punch Card Ballot System. Formerly owned by Computer Election Systems (CES) and (BRC).

Complete self-contained voting station – utilizes standard IBM computer card as ballot. Ballot slides into slot at top of unit. Voting is accomplished by punching through the ballot card with an attached stylus. Candidates' names and issues are printed on a book ballot assembly in center of unit.

Ballot cards can be counted by any standard computing equipment or a small portable computer called the Ballot Tab, which can count all precinct ballots at one central location. A small version of the Ballot Tab is the Precinct Ballot Tab.

February 29, 1988.   Kenneth P. Hazlett

                      Punch Card Ballot Election Tabulation Network (ETNet).

The election Tabulation Network and stand alone PC is a system of Microsoft Windows applications that work together to allow the user to create the election database, count punch card ballots, and report results in printed, displayed, and Internet form. At the heart of the ETNet system is a spreadsheet that allows election data to be entered in a way that is both intuitive and visual.

The simplest ETNet system consists of one PC, one card reader, and a printer. More complex systems employ a network of PCs to support multiple card readers and/or results viewing stations. ETNet provides support for the Documentation compatible card reader using a proprietary, standard bus, adapter card and cable. ETNet supports the PDI card reader using the PDI serial cable.

June 24, 2005   Sequoia Voting Systems.
                         Complete the Arrow Optical Scan Voting System
                         EMS/AERO 3.54.1 software
                         Optech 400-C central count tabulator/ WinETP v. 1.10.5 software
                         Optech Insight precinct tabulator
                         MPR v. 2.15 Memory Pack Receiver

An arrow optical scan system for use in the 5 counties using Arrow style ballots. The software is compatible with the older Optech III-P Eagle precinct tabulator, which uses infrared scanning technology, and the Optech Insight precinct tabulator and the Optech 400-C central count tabulator, which utilize visible light scanning technology.

June 24, 2005   Sequoia Voting Systems.

Direct Recording Electronic Voting System
AVC "EDGE" DRE v. 4.3.320
WinEDS v. 3.0.134 software
VeriVote printer
Card Activator v 4.3.320

The AVC "EDGE" DRE is a direct recording electronic voting system and votes are stored in the machine on 3 PCMCI memory cards. The voter activates the device with an activation card provided by the poll worker and enters their votes on a touch screen. The system includes the "VeriVote" printer attached to the side of the DRE and meets the voter verified paper audit trail requirement. The device is accessible to persons with disabilities. Over voting is prevented. The voter may review their selections on a review screen before casting their ballot. After casting their ballot, the voter's selections are printed by the VeriVote printer under a clear plastic screen. The voter may again review and change their selections if they wish to. When the voter finally approves of their selections and casts their ballot the printed record of their selections rolls into the printer and is hidden from view.

Tabulation is accomplished by removing one of three memory cards from the device and inserting the memory card into a laptop computer running the EMS/AERO v 3.54.1 Election Management Software.

January 24, 1992	Sequoia Voting Systems.
	OPTECH IV-C 200. Formerly owned by Business Records Corporation (BRC).
	Arrow Optical Scan Central Count Tabulator.

September 6, 1990   Sequoia Voting Systems.
OPTECH IV-C 400. Formerly owned by Business Records Corporation (BRC).
Arrow Optical Scan Central Count Tabulator

OPTECH III-P "Eagle"
Arrow Optical Scan Precinct Count Tabulator

The Optech IV-C 400 & 200 is a personal computer based machine, which uses a DOS operating system and BRC's Election Tabulation System software to count and record the votes. Election Management System (EMS) application software is used to interface with ETP

enabling the operator to create the election, define precincts, specify candidates and issues, and create ballot styles. With personal computer knowledge and with the aid of the EMS User's Guide programming an election should not be difficult.

The OPTECH IV-C 400 & 200 are for a central count. The OPTECH III-P Eagle is for use on the precinct level.

Note: Computer Election Systems (CES) became Business Records Corporation, (BRC) in 1971.
             BRC & American Information Systems (AIS) merged into a new company, Election Systems & Software, (ES&S) November 20, 1997. ES&S or Sequoia Voting Systems can provide Arrow optical scan ballots, for the 5 counties currently using them, as well as voting devices, precinct tabulators and central count tabulators.

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