Declaration of Rick Weible

Pursuant to 28 U.S.C Section 1746, I, Rick Weible make the following declaration.

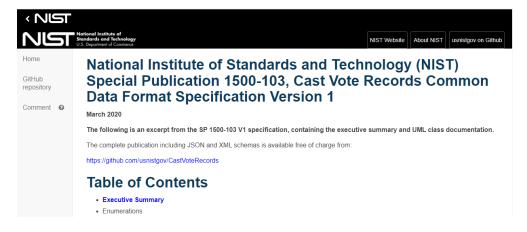
- 1. I am over the age of 21, and I am under no legal disability, which would prevent me from giving this declaration.
- 2. I currently reside at 803 Elk Street, Elkton, SD 57026.
- 3. I currently serve on the City Council of Elkton, SD.
- 4. I am a computer network engineer and data analysis expert with over 25 years of industry experience. Owner of a small computer consulting company, that has been in business for over 25 years providing compliance certifications, desktop support, programming, network management and security, web development and hosting.
- 5. In Minnesota when you hand count an election, the count is done publicly, to where an observer can see with their eyes and hear with their ears how the election officials are determining the count for each race on the ballot. We see that in Minnesota State Statute 204C.19.

204C.19 COUNTING VOTES: PENALTY.

Subdivision 1. **Procedure.** When the hours for voting have ended and all voting has concluded, the election judges shall immediately count the votes cast at the election. The count shall be held at the polling place and shall be public. It shall be continued without intermission until it is completed and the results are declared, except that the election judges may recess for meals or other necessary purposes. During the count no one except the election judges shall handle the ballots. Any other individual who touches or interferes with ballots during the counting or any election judge who permits such touching or interference is guilty of a misdemeanor.

https://www.revisor.mn.gov/statutes/cite/204C.19

6. The term Cast Vote Records (CVR) is not defined by Minnesota State Statutes, instead it is defined by the National Institute of Standards and Technology (NIST), under the US Department of Commerce, just like other weights and measurements defined for federal use. The publication of the standards and the definition is meant for the public, like a building code, in comparison to the Department of Defense standards which are not meant for the public.



There are many complex operations performed by voting devices when voters submit their paper ballots to be scanned. These operations are mostly invisible to voters but are necessary to determine whether contest selections have been marked adequately and whether voter intent is reflected by what is marked on the ballot. This specification includes the necessary detail to capture these operations so that CVRs can be better audited and adjudicated as necessary to include write-in candidates or other issues.

This specification is geared towards the following audiences

- · Election officials
- · Voting equipment manufacturers
- · Election analysts and auditors
- · Election-affiliated organizations
- · The public

https://pages.nist.gov/CastVoteRecords/

7. The Cast Vote Records (CVR) is further explained in detail as a useful tool to be able to audit the performance and accuracy of the election systems, specifically the tabulators. This can be found on page iii.

SP 1500-103, Version 1.0 NIST Cast Vote Records CDF Specification

Executive Summary

This document presents an interoperable, common data format specification for cast vote records (CVR), which are produced by vote-capture devices such as ballot scanners. A CVR is an electronic record of a voter's selections, with usually one CVR created per sheet (page) of a ballot. Election results are produced by tabulating the collection of CVRs, and audits can be done by comparisons of the paper ballots or paper records of voter selections against the CVRs.

This specification supports three general use cases for CVRs:

- Interoperable exports of CVRs from devices such as scanners for import into tabulators, election management systems (EMS), or auditing systems.
- Interoperable exports of aggregated collections of CVRs from aggregating devices such as election management systems.
- Update of CVRs after adjudication.

The purpose of this specification is to provide an interoperable, non-proprietary data exchange format in JavaScript Object Notation (JSON) and eXtensible Markup Language (XML) for CVRs so as to promote greater transparency to voting records produced by vote-capture devices, and to facilitate the exchange of CVRs with other devices that operate upon CVRs regardless of device manufacturer.

https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1500-103.pdf

8. Here is an overview of the Cast Vote Records (CVR) as defined by the National Institute of Standards and Technology (NIST), a division of the US Department of Commerce in its publication "NIST Special Publication 1500-103 – Cast Vote Records Common Data Format Specification Version 1.0" in section 2.1 (page 3)

2.1 Overview of Cast Vote Records and their Generation

Simply put, a cast vote record (CVR) is an electronic record of a voter's ballot selections, and its primary purpose is to provide a record of voter selections that can be counted in an efficient manner to produce election results. A CVR is created by equipment such as a voter facing scanner in a polling place into which a voter inserts a paper ballot. CVRs also get created by batch fed scanners used to scan absentee or other types of ballots that are collected before the election or that cannot be scanned by polling place scanners for various reasons. After the polls are closed, the CVRs are collected by election officials on memory devices and subsequently copied to an election management system that aggregates and tabulates the votes.

Three primary types of voting devices that create CVRs are:

- All-electronic voting devices that a voter uses to make ballot selections and that create and store a CVR for each ballot.
- Ballot marking devices (BMDs) that function like all-electronic devices but that produce a paper record of the voter's choices that must be subsequently scanned.
- Voter-facing optical scanners used in polling places and batch-fed optical scanners used in central offices to scan paper ballots.

The scanning devices above are sometimes referred to collectively as "tabulators" because they generally have a tabulation capability, but this is not always the case.

CVRs may include other information besides voter choices, including:

- . Information on all contests and contest options on the ballot in addition to those marked
- The ballot style associated with the CVR
- · The precinct or location associated with the CVR
- The equipment that produced the CVR
- · The political party associated with the ballot for partisan primaries
- · Images of the entire ballot and images of write-in areas on the ballot
- An identifier that is also printed on the ballot as it is scanned
- · Indications of how the scanner has interpreted various marks.

This specification includes support for the above items.

https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1500-103.pdf

 Here is an overview of the audit of the Cast Vote Records (CVR) as defined by the National Institute of Standards and Technology (NIST), a division of the US Department of Commerce in its publication "NIST Special Publication 1500-103 – Cast Vote Records Common Data Format Specification Version 1.0" in section 2.1 (page 5)

2.4 Auditing Cast Vote Records

CVRs need to be audited against their paper counterparts so that election results can be verified to be accurate. This specification supports auditing by providing the following as options:

- Support for ballot-level comparison auditing, that is, there is an identifier in the CVR that
 can be linked to an ID printed on the corresponding paper ballot.
- · Support to include adjustments to contest selections made by adjudicators.
- Different snapshots of the CVR can be created, one for the original scan, one for after election rules have been applied, and others as needed for adjudications.
- Indications of marginal marks, mark quality/density can be associated with contest selections.
- A CVR can include signed/hashed references to an associated image of the ballot or images of write-ins made by the voter.
- Capability to include batch information such as batch IDs and sequence within the batch.

https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1500-103.pdf

10. In 2002 the Help America Vote Act (HAVA) was passed and signed into law, to establish a program to provide funds to States to replace punch card voting systems, to establish the Election Assistance Commission to assist in the administration of Federal elections and to otherwise provide assistance with the administration of certain Federal election laws and programs, to establish minimum election administration standards for States and units of local government with responsibility for the administration of Federal elections, and for other purposes.

A voting system is defined by Federal Law, Help America Vote Act of 2002, HR 3295-41:

- (b) VOTING SYSTEM DEFINED.—In this section, the term "voting system" means—
 - (1) the total combination of mechanical, electromechanical, or electronic equipment (including the software, firmware, and documentation required to program, control, and support the equipment) that is used—
 - (A) to define ballots;
 - (B) to cast and count votes;
 - (C) to report or display election results; and
 - (D) to maintain and produce any audit trail information; and
 - (2) the practices and associated documentation used—
 - (A) to identify system components and versions of such components;
 - (B) to test the system during its development and maintenance;
 - (C) to maintain records of system errors and defects;
 - (D) to determine specific system changes to be made to a system after the initial qualification of the system;
 - (E) to make available any materials to the voter (such as notices, instructions, forms, or paper ballots).

https://www.eac.gov/sites/default/files/eac_assets/1/6/HAVA41.PDF

- 11. The Minnesota State Statutes 206.57, established requirements for voting systems, the statute states "a voting system must be certified by an independent testing authority accredited by the Election Assistance Commission or appropriate federal agency responsible for testing and certification of compliance with the federal voting systems guidelines at the time of submission of the application required by subdivision 1 to be in conformity with voluntary voting system guidelines issued by the Election Assistance Commission or other previously referenced agency." US Election Assistance Commission (the EAC) and its web site is www.eac.gov
 - Subd. 6. Required certification. In addition to the requirements in subdivision 1, a voting system must be certified by an independent testing authority accredited by the Election Assistance Commission or appropriate federal agency responsible for testing and certification of compliance with the federal voting systems guidelines at the time of submission of the application required by subdivision 1 to be in conformity with voluntary voting system guidelines issued by the Election Assistance Commission or other previously referenced agency. The application must be accompanied by the certification report of the voting systems test laboratory. A certification under this section from an independent testing authority accredited by the Election Assistance Commission or other previously referenced agency meets the requirement of Minnesota Rules, part 8220.0350, item L. A vendor must provide a copy of the source code for the voting system to the secretary of state. A chair of a major political party or the secretary of state may select, in consultation with the vendor, an independent third-party evaluator to examine the source code to ensure that it functions as represented by the vendor and that the code is free from defects. A major political party that elects to have the source code examined must pay for the examination. Except as provided by this subdivision, a source code that is trade secret information must be treated as nonpublic information, according to section 13.37. A third-party evaluator must not disclose the source code to anyone else.

12. The Voluntary Voting Systems Guidelines Version 1.0 (VVSG 1.0) Volume 1, section 7 as established and adopted by the EAC in 2005, deals with Security Requirements.

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Technical Guidance for Color, Contrast, and Text Size				

The Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0) Volume 1, section 7.8 Independent Verification Systems (pages 134-136), developed by the US Election Assistance Commission (EAC.gov), explains the reasoning for the cast vote records, as a way to provide an independent verification to the accuracy and security of the tabulators, in detail, this is a **requirement and not optional...:**

7.8 Independent Verification Systems

7.8.1 Overview

Independent verification (IV) systems are electronic voting systems that produce multiple independent cast vote records of voter ballot selections, which can be audited to a high level of precision. For this to happen, the cast vote records must be handled according to the following protocol:

- At least two cast vote records of the voter's selections are produced and one of the
 records is then stored in a manner that it cannot be modified by the voting system.
 For example, the voting system creates a record of the voter's selections and then
 copies it to unalterable storage media.
- The voter must be able to verify that both cast vote records are correct and match before leaving the polling place, e.g., verify his or her selections on the voting machine summary screen and also verify the second record on the unalterable storage media.
- The verification processes for the two cast vote records must be independent of each other, and at least one of the records must be verified directly by the voter.
- The contents of the two cast vote records also can be checked later for consistency through the use of unique identifiers that allow the records to be linked.

The cast vote records would be formatted so that at least one set is usable in an efficient counting process by the electronic voting system and the other set is usable in an efficient process of auditing or verifying the agreement between the two sets.

Given these conditions, the multiple cast vote records are considered to be distinct and independently verifiable, that is, both records are not under the control of the same system processes. As a result of this independence, the audit records can be used to check the accuracy of the counted records. Because the records are separately stored, an attacker who can compromise one will also have to compromise the other.

The voter verifiable paper audit trail (VVPAT) methodology is one of several classes of IV systems. In this approach, the voter can directly compare the electronic summary screen of the voting machine with the printed paper audit record. (This is not to be confused with the

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Version 1.0

Volume I: Voting System Performance Guidelines 7 Security Requirements

paper ballot that is produced by optical scan voting systems that the voter visually verifies before placing it in the ballot box or tabulator.) Requirements for DREs with a VVPAT feature are provided below to reflect the fact that a number of States currently require this feature.

There are a variety of other IV approaches for the voter to verify his or her selections with systems that produce an electronic record for verification. Appendix C describes the characteristics of these systems in more detail. They include:

- Split process systems, which use separate devices for the voters to record and verify their ballot selections
- Cryptographic systems, which provide voters with coded receipts that can be used to verify their ballot selections
- · Witness systems, which use an independent module to create the second record

7.8.2 Basic Characteristics of IV Systems

This section describes a preliminary set of basic characteristics that apply to all types of IV systems. This information is provided for the purpose of introducing these concepts for consideration in voting system design. It is anticipated that future voting systems will be required to provide some type of independent verification feature to enable voters to have confidence that their ballot selections are correctly recorded and counted.

An independent verification system produces at least two independent cast vote records of ballot selections via interactions with the voter, such that one record can be compared against the other to check their equality of content.

Discussion: This is the fundamental characteristic of IV systems. The records can be checked against one another to determine whether or not the voter selections are correctly recorded.

The voter verifies the content of each cast vote record and either (a) verifies at least one of the records directly or (b) verifies both records indirectly if the records are each under the control of independent processes.

Discussion: Direct verification involves using human senses; for example, directly reading a paper record via one's eyesight. Indirect verification involves using an intermediary to perform the verification; for example, verifying an electronic ballot image on the voting machine.

The creation, storage and handling of the cast vote records are sufficiently separate that the failure or compromise of one record does not cause the failure or compromise of another.

Discussion: The records must be stored on different media and handled independently of each other so that no one process could compromise all records. If an attack can alter one record, it should still be very difficult to alter the other record.

Both cast vote records are highly resistant to damage or alteration and capable of long-term storage.

Discussion: The records should be difficult to alter or damage so that they could be used in case the counted records are damaged or lost.

The processes of verification for the cast vote records do not all depend on the same device, software module, or system for their integrity, and are sufficiently separate that each record provides evidence of the voter's selections independently of its corresponding record.

Discussion: For example, the verification of the summary screen (electronic record)
of a DRE is sufficiently separate from the verification of a paper record
printed by a VVPAT component or a copy of the electronic record
stored on a separate system.

The multiple cast vote records are linked to their corresponding audit records by including a unique identifier within each record.

Discussion: The identifier serves the purpose of uniquely identifying and linking the records for cross-checking.

Each cast vote record includes information identifying the following:

- · An identification of the polling place and precinct
- · Whether the balloting is provisional, early, or on election day
- Ballot style
- A timestamp generated when the voting machine is enabled to begin a voting session that can be used to correctly group the cast vote records
- · A unique identifier associated with the voting machine

Discussion: The identifier could be a serial number or other unique ID.

The cryptographic software used in IV systems is approved by the U.S. Government's Cryptographic Module Validation Program, as applicable.

Discussion: IV voting systems may use cryptographic software for a number of different purposes, including calculating checksums, encrypting records, authentication, generating random numbers, and for digital signatures. This software should be reviewed and approved by the Cryptographic Module Validation Program (CMVP). There may by cryptographic voting schemes where the cryptographic algorithms used are necessarily different from any algorithms that have approved CMVP implementations, thus CMVP-approved software shall be used where feasible. The CMVP website is http://csrc.nist.gov/cryptval.

13. The Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0) Volume 1, section 7.9 Voter Verifiable Paper Audit Trail Requirements (pages 139) is a standard that is **not** required, and the example is provided here to show the language is different from above and makes very clear the intent of the US Election Assistance Commission.

Version 1.0

Volume I: Voting System Performance Guidelines 7 Security Requirements

7.9 Voter Verifiable Paper Audit Trail Requirements

This section contains requirements for DREs with a Voter Verifiable Paper Audit Trail (VVPAT) component. VVPAT capability is not required for national certification. However, these requirements will be applied for certification testing of DRE systems that are intended for use in states that require DREs to provide this capability. The vendor's certification testing application to the EAC must indicate whether the system being presented for testing includes this capability, as provided under Subsection 1.6.2.5 extensions.

https://www.eac.gov/sites/default/files/eac assets/1/28/VVSG.1.0 Volume 1.PDF

14. The Cast Vote Records are also used in adjudication for ballots requiring additional inspection as laid out in "NIST Special Publication 1500-103 – Cast Vote Records Common Data Format Specification Version 1.0" in section 2.3 (page 4-5)

2.3 Adjudication of Cast Vote Records

After a CVR collection has been exported, a number of the CVRs may require additional inspection and adjustment as part of a process known as adjudication, which may be done on an EMS by election officials. Write-ins are the most common reason:

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SP 1500-103, Version 1.0 NIST Cast Vote Records CDF Specification

- On ballots produced by BMDs the write-in names could still be spelled differently or incorrectly, and
- For scanned paper ballots, either the ballots themselves or the images of the write-in areas of the ballot that were made by the scanner must be inspected.

There are a number of other reasons why ballots may require adjudication, such as:

- The ballot was unreadable by the scanner.
- The voter may have marked the ballot in ways that are difficult to interpret, for example, the voter may have circled the ovals instead of filling them in.
- · The scanner detected one or more overvotes.
- · The scanner detected that the entire ballot was blank.

This specification provides the capability to update the CVR with multiple annotations made by adjudicators, recording the following items:

- The adjudicator name(s).
- Time stamp of when the adjudication(s) was made.
- . The adjudication, i.e., the action taken by the adjudicator(s).

https://www.govinfo.gov/content/pkg/GOVPUB-C13-

5ece0a87c83a2a7d2ba2072e7420c584/pdf/GOVPUB-C13-

5ece0a87c83a2a7d2ba2072e7420c584.pdf

15. The cast vote records provide a way to audit election equipment against their paper counter parts for accuracy purposes as outlines in "NIST Special Publication 1500-103 – Cast Vote Records Common Data Format Specification Version 1.0" in section 2.4 Auditing Cast Vote Records (page 5) states - "CVRs need to be audited against their paper counterparts so that election results can be verified to be accurate."

2.4 Auditing Cast Vote Records

CVRs need to be audited against their paper counterparts so that election results can be verified to be accurate. This specification supports auditing by providing the following as options:

- Support for ballot-level comparison auditing, that is, there is an identifier in the CVR that
 can be linked to an ID printed on the corresponding paper ballot.
- Support to include adjustments to contest selections made by adjudicators.
- Different snapshots of the CVR can be created, one for the original scan, one for after election rules have been applied, and others as needed for adjudications.
- Indications of marginal marks, mark quality/density can be associated with contest selections.
- A CVR can include signed/hashed references to an associated image of the ballot or images of write-ins made by the voter.
- Capability to include batch information such as batch IDs and sequence within the batch.

https://www.govinfo.gov/content/pkg/GOVPUB-C13-5ece0a87c83a2a7d2ba2072e7420c584/pdf/GOVPUB-C13-5ece0a87c83a2a7d2ba2072e7420c584.pdf

16. The EAC Certificate for ES&S EVS 6.1.1.0, can be found at the US Election Assistance Commission (EAC) site. The first page of the certificate shows that Voting systems are tested to the Voluntary Voting Guidelines Version 1.0 (VVSG 1.0).



https://www.eac.gov/sites/default/files/voting_system/files/ES%26S%20EVS6110%20Certificate %20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf

17. The EAC Certificate for ES&S EVS 6.1.1.0, can be found at the US Election Assistance Commission (EAC) site. The first page of the certificate shows that Voting systems are tested to the Voluntary Voting Guidelines Version 1.0 (VVSG 1.0). On page 3 we see the DS200, DS450 and DS850 do a "conversion of voter selection marks to electronic cast vote records(CVR)."

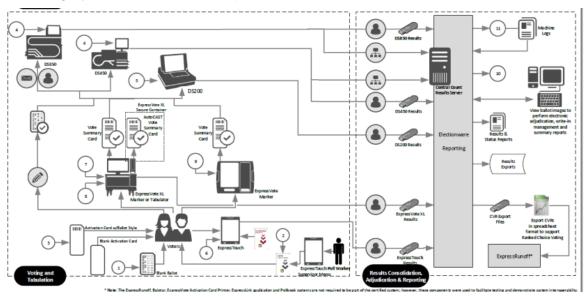
DS200° is a polling place paper-based voting system, specifically a digital scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic cast vote records (CVR).

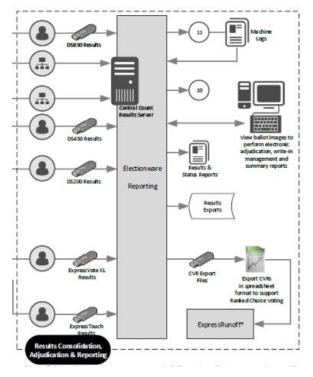
DS450® is a central scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic CVRs.

DS850® is a central scanner and tabulator that simultaneously scans the front and back of a paper ballot and/or vote summary card in any of four orientations for conversion of voter selection marks to electronic CVRs.

https://www.eac.gov/sites/default/files/voting_system/files/ES%26S%20EVS6110%20Certificate %20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf

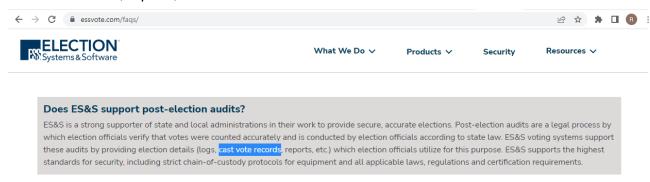
18. The EAC Certificate for ES&S EVS 6.1.1.0 on page 4 of the certificate shows that from the USB drives of the tabulators, once converted and decrypted by the Electionware Reporting System, that the CVR Export files are available.





https://www.eac.gov/sites/default/files/voting system/files/ES%26S%20EVS6110%20Certificate %20and%20Scope%20of%20Conformance%2007-27-2020.pdf.pdf

19. Election Systems & Software (ES&S) on its own web site explains that cast vote records (CVRs) exist in that it supports post-election audits by "providing election details (logs, cast vote records, reports, ..."



https://www.essvote.com/faqs/

20. In a publicly available ES&S manual published on-line from the California Secretary of State we can clearly see that the Cast Vote Records exist.

ES&S digital scanners use scanning technology similar to that of a copying machine to create two scanned images of the front and back of the ballot at the same time. These digital images are then processed by ES&S Electionware software, which creates a cast vote record (CVR). The CVR contains data from the front and back of the ballot and lists all vote selections made on the ballot. At the time of poll closing or data export, the CVRs are totaled to create aggregate results for that ballot scanning device. After the election, Electionware imports the tabulated results, machine logs, and images for reviewing, reporting, adjudication, and archiving.

https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs6042/ess-6042-proc.pdf

21. In a publicly available ES&S manual published on-line from the California Secretary of State we can clearly see the instructions of how to export and backup the Cast Vote Records and Ballot Images

7.2.5 Exporting Data

When data is exported from the Central Count tabulator, all files are digitally signed and, aside from the Audit Log, all files are also encrypted. The Audit Log is not encrypted to enable you to read it directly from your PC.

Data can be exported to a properly formatted (FAT32) blank ES&S flash drive. Or, if the Central Count is networked to a local server, data can be exported directly to the server.

Export Files – Use this option to export the <u>cast vote record</u> (CVR) for new or all batches scanned and saved on the Central Count, as well as all saved ballot images. This data can be imported into Electionware.

7.2.6 Backup

The Backup option enables you to do the following:

• Export the CVRs and specified image files to a blank flash drive

Use the Backup Export function to create periodic backup copies of the election data from all ballots processed up to that point. Keep ballots physically separated so you know which ballots belong to which backup flash drive.

 Collect results from a flash drive containing an exported copy of the CVRs and convert those to a format that can be used to read election results and data into Electionware.

The Backup Collect function creates the same files as are created in the Export Files function, but uses a different process and may require more time to perform than the Export Files function, especially if there is a large amount of data on the Central Count.

Use this function if a hardware or system problem prevents further scanning of ballots or if you discover an error in your procedures.

Chapter 10: Reporting

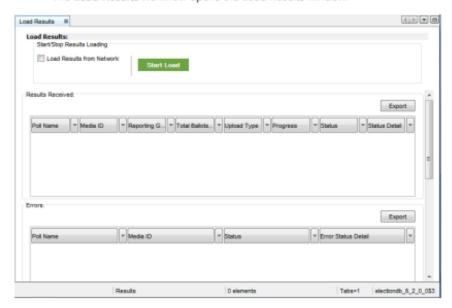
10.1 Overview

After the election, Reporting is used to import tabulated results, machine logs, cast vote records, and ballot images by reading the election media from the ES&S election equipment USB flash drives/networked results; review, export, and report election results and media device-related data; and review/adjudicate ballot images.

10.2 Loading Election Results

Load Results

The Load Results workflow opens the Load Results window.

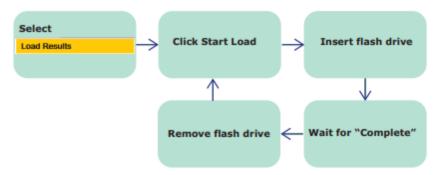


When loading results, as a precaution, it is recommended that you log in as a Reporting User (not as an Administrator).

10.2.1 Load Results Workflow Summary

The process of loading election results can be summarized in six basic steps:

- 1. Select the Load Results workflow.
- 2. If applicable, select Load Results from Network.
- 3. Click Start Load.
- 4. Insert a results flash drive.
- 5. When the status says "complete," remove the flash drive.
- 6. Repeat steps 4 and 5 until all results flash drives have been loaded.



11.6.2 Export Ballot Images

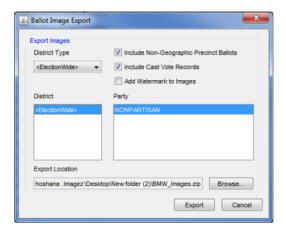
All ballot images can be exported in a ZIP file.

 From the Tools menu, select Export Ballot Images.

There are three items that can be optionally included in the export:

- Non-Geographic Precinct Ballots
- Cast Vote Records (CVR)
- Watermark

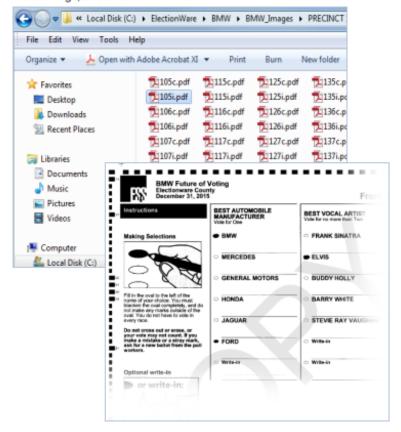
To be exported, at least one item and one district must be selected.





- In the Ballot Image Export window, specify ballot, and optionally, CVR export parameters:
 - To include absentee and early voting ballot images, select Include Non-Geographic Precinct Ballots.
 - To include CVRs with the exported ballot images created in Electionware using Non-Geographic Precincts, select Include Cast Vote Records.
 - The watermark identifies the printout as a ballot copy that is not intended for scanning. To include this on exported ballots, select Add Watermark to Images.
 - From the District Type list, select a district type.
 - The contents of the District list are determined by the selected District Type. Select the appropriate district(s).
 - Select the party or parties from the Party list.
- Browse to the target folder in which to save the file. Enter a filename for the ZIP file, then click Save.
- The Ballot Image Export window reappears, with the location and filename in the Export Location box. Click Export.
- When the export is complete, a confirmation dialog box will display the number of images exported, the specified export parameters, and the location and name of the ZIP file. Click OK.

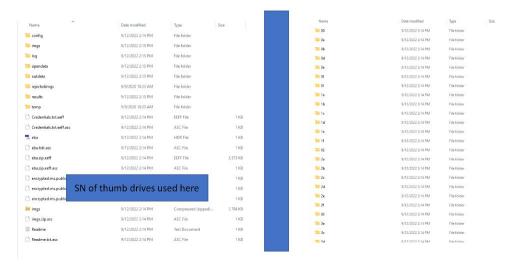
Ballot images (and optionally CVRs) are exported as individual PDF files within the *.zip archive. These PDF files are sorted in folders, by precinct and party. Each file is identified by CVR number, followed by the letter "i" if the file is a ballot image, or the letter "c" if the file is a cast vote record.



https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs6042/ess-6042-proc.pdf

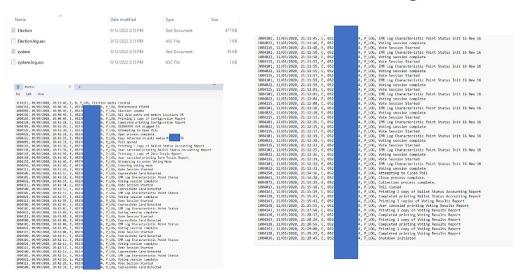
22. Here are screen shots of a DS200 Thumb Drive after a typical backup

DS200 - Thumb Drive Screen Shots



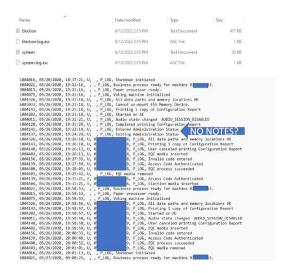
23. Herer is the Election Log file from a DS200 Thumb Drive after a typical backup

DS200 - Thumb Drive - Election Log File



24. Here is the System Log file from a DS200 Thumb Drive after a typical backup

DS200 – Thumb Drive – System Log File



25. I am aware of the ability of ES&S to provide support to help counties get this data, the support number, email and hours are in the manuals.

Support representatives are available Monday through Friday, between 7:00 a.m. and 7:00 p.m. Central Time.

Telephone: 877-377-8683 (USA & Canada)

Fax: 402-970-1285

Email: technicalsupport@essvote.com

https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs6042/ess-6042-proc.pdf

- 26. I am aware that Wright County has purchased and has support for the Electionware Reporting software, to where they can export the Cast Vote Records and ballot images.
- 27. I am aware that the Voluntary Voting System Guidelines 1.0 (2005) requires that voter identifies be protected, in that it requires that the time stamp of the CVRs and ballot images cannot be traced to any voter, and that the specification requires that the time stamp of all files be changed to the time stamp that the voting session began, and that the order of the ballots stored be randomized to protect the voters. We also see that evidence in a request for information in Georgia.

BALLOT IMAGES/CAST VOTE RECORDS

The units providing tabulation functionality can also capture digital images of each ballot or vote summary card cast and associated Cast Vote Record (CVR), which also can be used for recounts and adjudication.

To ensure security and protect voter anonymity, the ballot images and CVRs are stored with random names assigned to each ballot image file and have their file timestamps obfuscated.

Electionware provides online adjudication that retains both the CVR as initially tabulated and the adjudication board's modified CVR. The ballot image, the machine-generated original CVR, and the review board-modified CVR can be reviewed alongside each other.

PAPER TRAIL

The paper ballot or vote summary card also provides an audit trail that is available to jurisdictions in the event a recount, including manual recount, is required.

Enhancing the State of Georgia Election Process

Does your solution include Election Night Reporting capabilities? If so, please describe your Election Night Reporting solution, including security features.

.....

ES&S RESPONSE

After the election, the Reporting module in Electionware is used to import tabulated results, machine logs, cast vote records, and ballot images by reading the election media from the ES&S election equipment USB flash drives/networked results; review, export, and report election results and media device-related data; and review/adjudicate ballot images.

The Election Results workflow is used to generate paper and electronic tabulated results reports and exports. The Reporting module can produce summary and custom table reports, as well as exports, each of which can be adjusted to fit your needs:

- Summary Results: By election, precinct, or precinct/split
- Custom Table Results (Canvass-style report): By precinct, precinct/split, poll, ballot style, or district
- Plain Text (similar to the ASCII export from Election Reporting Manager software): Summary or Precinct Detail
- XML: Enhanced, Standard, or Custom
- CSV: Precinct Detail

With the Electionware reporting module, the State of Georgia can export various reports in multiple formats, including HTML, which can be posted to election night reporting websites at both the state and county level.

https://sos.ga.gov/sites/default/files/2022-03/ess rfi - final - redacted.pdf

28. Dodge County, Wisconsin, publishes their cast vote records and ballot images for the public to download and review. I have downloaded those files and have done a review of the files. There are 39,325 Ballot Images and Cast Vote Records, it takes about 8 GB of space.



Ballot Images and Cast Vote Records - November 8, 2022

Disclaimer

Please note Cast Vote Record (CVR) Reports are unofficial results from election night. These are the results the voting equipment tabulated on Election Day. The final, official canvass results posted on the Wisconsin Elections Commission's website for any state/federal races also include counted provisional ballots and other small adjustments. These adjustments are not tallied by, or in, the voting equipment, rather through the County Board of Canvass process. The Cast Vote Record (CVR) Reports contain all data fields available in the ES&S Election Software. Also, please note that if a Municipal Clerk has accidentally corrupted their election data after printing their results tapes and electronically transferring the results into the County for a specific election, that data will not be able to be archived and therefore, would have no ballots to be read and included in the CVR Report.

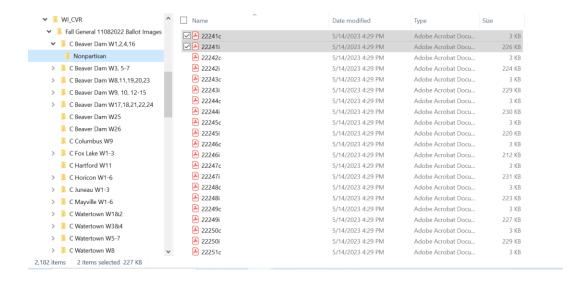
The ZIP files below contain PDF documents showing the ballot images from the November 8, 2022 election. Each ballot has two files associated with it. The two files will have the same number. One will end with an "i" the other will end with a "c" (e.g. 31473i.pdf and 31473c.pdf). The file ending with "i" contains an image of the ballot. The file ending with "c" contains the Vote Cast Record showing how the tabulator counted the ballot.

Cast Vote Record - November 8, 2022

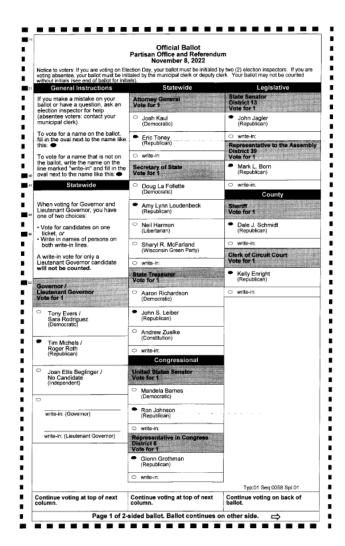
Ballot Image and Ballot CVR Zip Files - November 8, 2022

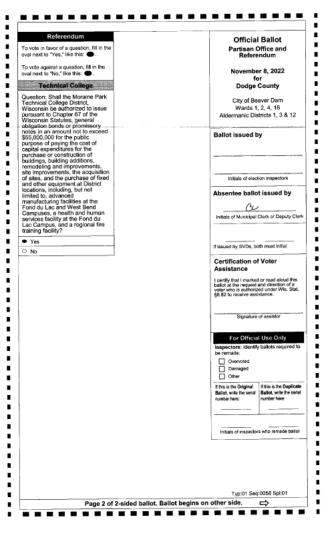
https://www.co.dodge.wi.gov/departments/departments-a-d/county-clerk/election-information/election-results/election-results-2022

29. This is a screen shot of the downloaded files from Dodge County, WI. The files are separated by precinct, and then the files with the "c" designation are Cast Vote Records, and the "I" files are Ballot Images.



30. This is a screen shot of one of the ballot images from WI.





31. This is a screen shot of the corresponding Cast Vote Record, of how the tabulator interpreted the ballot:

Cast Vote Record: 22,241 Poll Place: BD Trinity W 1,2,4,16,26 Precinct: C Beaver Dam W1,2,4,16 Ballot Style: C Beaver Dam W1,2,4,16 [Sheet Number 1] Party: Nonpartisan Tabulator CVR: 00e92ad8f81463a5 Machine Serial: DS200 - 0317350819 Blank Ballot: NO Reporting Group: Election Day Contests: Gov/Lt. Gov (245) Vote For: 1 Michels / Roth (369) Counted Attorney Gen (250) Vote For: 1 Eric Toney (375) Counted Sec State (255) Vote For: 1 Counted Amy Lynn Loudenbeck (379) State Treas. (260) Vote For: 1 John S. Leiber (387) Counted US State Sen (265) Vote For: 1 Ron Johnson (393) Rep Congress Dist 6 (275) Vote For: 1 Counted Glenn Grothman (399)

State Sen Dist 13 (280) Vote For: 1 Counted John Jagler (401) Rep Assem Dist 39 (290) Vote For: 1 Counted Mark L. Born (407) Sheriff Dodge Co (310) Vote For: 1 Counted Dale J. Schmidt (417) Circuit Court Clerk Dodge Co (320) Vote For: 1 Counted Kelly Enright (421) Ref Instructions with (330) Vote For: 0 Referendum MPTC (333) Vote For: 1 Counted Yes (335)

32. This direct warning from ES&S regarding folding of ballots is of serious concern, since most of the County Auditors are not properly evaluating their systems to determine if this is an issue or not.

EVS 6042 CA Election Management System Chapter 2: Paper Ballot Specifications

2.6.6 Folding Ballots

A folding machine should be used to expedite the process of folding ballots. In addition, roller pressures should be reduced to about 2 – 3X thickness of ballot stock.

Caution



- Do not fold across timing marks, ovals, write-in spaces (marked or unmarked), or arrows, as this may cause tabulation errors.
- Fold as few times as possible.
- When removing from envelopes, place all ballots in the same orientation for proper back-bending.

2.6.7 Perforating and Numbering Ballot Stubs

A ballot stub is a non-readable portion of the ballot that election workers remove at the polling place for auditing purposes. Stubs usually contain at least one identification number (such as a precinct identification number or sequence code number) and a sequentially printed number that matches the number on the ballot, used to audit ballots that have been cast. Ballots should be perforated for easy separation.

https://votingsystems.cdn.sos.ca.gov/vendors/ess/evs6042/ess-6042-proc.pdf

33. We have observed the issue of the folds in Dodge County, WI on Cast Vote Record and Ballot ID 34,195. We can see that the tabulator in this case interpreted the fold as a vote and invalidated the vote that the voter had cast and considered it to be an overvote, to where the voter intent was lost and the vote for that race did not count.

Covernor / Lieutenant Governor Vote for t	Aaron Richardson (Democratic)	County
O Tony Evers / Sara Rodriguez (Democratic)	 John S. Leiber (Republican) 	Dale J. Schmidt
	Andrew Zuelke (Constitution)	(Republican)
 Tim Michels / Roger Roth (Republican) 	o write-in:	Clert of Chautscont
O Joan Ellis Beglinger / No Candidate (Independent)	Congressional	 Kelly Enright (Republican)
	Mandela Barnes (Democratic)	O write-in:
write-in: (Governor)	Ron Johnson (Republican)	1
write-in: (Lieutenant Governor)	o write-in:]
	_	

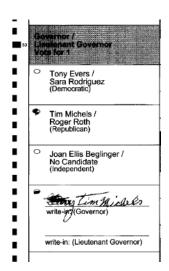
If you ballot electi	t initials (see end of ballot for init General Instructions	ection Day, your ballot must be initialed i	
If you ballot electi (abse		als).	by two (2) election inspectors. If you are terk. Your ballot may not be counted
electi (abse		Statewide	Congressional
(abse	make a mistake on your or have a question, ask an on inspector for help		· 特権制
	intee voters: contact your cipal clerk).	○ Josh Kaul (Democratic)	Mike Van Someren (Democratic)
fill in this:	te for a name on the ballot, the oval next to the name like	Eric Toney (Republican)	 Scott Fitzgerald (Republican)
To vo	te for a name that is not on	o write-in:	o write-in:
line m	allot, write the name on the narked "write-in" and fill in the next to the name like this:		Legislative
Jvali	Statewide	O Doug La Follette	
		(Democratic)	 John Jagler
When	voting for Governor and enant Governor, you have	 Amy Lynn Loudenbeck (Republican) 	(Republican)
one o	f two choices:	Neil Harmon	o write-in:
tick	e for candidates on one et, or	(Libertarian)	Representative to the Assault District 37 Vote for 1
boti	e in names of persons on h write-in lines. e-in vote for only a	 Sharyl R. McFarland (Wisconsin Green Party) 	Maureen McCarville (Democratic)
Lieute	enant Governor candidate lot be counted.	O write-in:	William Penterman (Republican)
		State Tressurer Vote for 1	(Republican)
Gove	ritor / enant Governor for 1	Aaron Richardson	County
Vete	lor I	(Democratic)	MANAGEMENT AND
S	ony Evers / lara Rodriguez Democratic)	John S. Leiber (Republican)	Sheriff Vote for 1
		Andrew Zuelke	(Republican)
R	im Michels / toger Roth	(Constitution)	o write-in:
(1	Republican)	Congressional	Vote for t
۰)	oan Ellis Beglinger / lo Candidate ndependent)		 Kelly Enright (Republican)
	independently	Mandela Barnes (Democratic)	O write-in:
wr	ite-in: (Governor)	Ron Johnson (Republican)	
		O write-in:	
_	te-in: (Lieutenant Governor)		



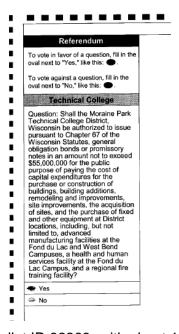
	А	В	С	D	E	F
1	Cast Vote Record	Precinct	Ballot Style	Gov/Lt. Gov (245)	Attorney Gen (250)	Sec State (255) S
34177	34177	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34178	34178	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34179	34179	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34180	34180	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34181	34181	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34182	34182	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34183	34183	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34184	34184	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34185	34185	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34186	34186	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34187	34187	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34188	34188	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34189	34189	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34190	34190	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34191	34191	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND)	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34192	34192	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34193	34193	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34194	34194	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34195	34195	C Watertown W1&2	C Watertown W1&2	overvote	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe R
34196	34196	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34197	34197	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34198	34198	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe(R
34199	34199	C Watertown W1&2	C Watertown W1&2	REP Michels / Roth (CND	REP Eric Toney (CND0005	REP Amy Lynn Loudenbe(R
34200	34200	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND
34201	34201	C Watertown W1&2	C Watertown W1&2	DEM Evers / Rodriguez (C	DEM Josh Kaul (CND0004	DEM Doug La Follette (CND

https://www.co.dodge.wi.gov/departments/departments-a-d/county-clerk/election-information/election-results/election-results-2022

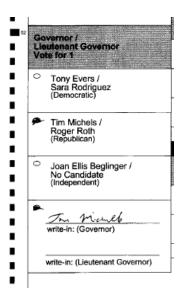
34. When using ES&S equipment in Wisconsin, Minnesota, South Carolina and South Dakota, we do not have a process to deal with Voter intent, when it comes to over votes, the three states, invalidate the race where the over vote occurred, and perform no further evaluation of the race, and move on to other races on the ballot for consideration and tabulation. Here are some examples of over votes that were not counted towards the totals:



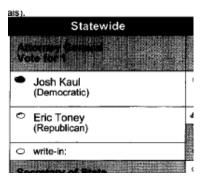
Ballot ID 37898



Ballot ID 32268- with about 10% coverage on No vote is now an over vote.

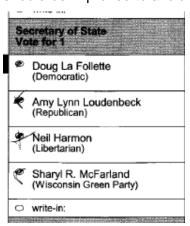


Ballot ID 14978 - voter intent is completely lost and this is an over vote

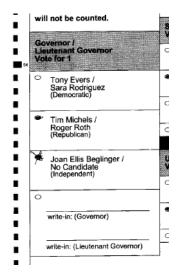


Ballot ID 11035 – just 5% coverage on Toney has caused this to be an over vote.

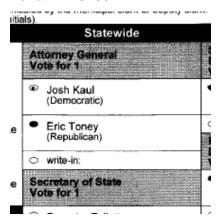
35. To be fair, voter intent at times is impossible to determine, and voters have the responsibility to ensure the best possible outcomes, education by election officials should be improved to avoid these situations.



Ballot ID 39041



Ballot ID 29260



Ballot ID 24900

36. Evaluating the Cast Vote Records helps election officials and the public understand issues that can cause problems with the systems, and to better educate both officials and the public on how to prevent those issues. The main advantage of the Cast Vote Records and ballot images is that it provides transparency in our elections and gives us documented evidence in how we can improve our elections through education of both the voters and election officials. We have also observed that voters should not use sharpies, as they bleed through the ballots. Voter intent is lost, when using the machines and voters who make a mistake need to understand that even a small mark in the wrong oval, can invalidate a vote for an office, since it could be considered an over vote. Training is available from ES&S, as we see from request for information in the State of Georgia, it makes logical sense that training can be obtained by election officials

from Minnesota.

Enhancing the State of Georgia Election Process

In these Electionware modules, the participant will gain the following knowledge, skills, and abilities:

- Coding staff
 Number of Participants:
- Define Build, maintain, and store all election-related information (i.e., precincts, districts, offices, candidates, referenda) in one database.
- Design Create an election ballot in both electronic and paper format.
- Deliver Program the election tabulation hardware with election-specific information.
- Results Generate and display customized election reports in paper or electronic formats, as well as view and manage ballot images captured from ES&S tabulation hardware.
- Manage Manage user account and security access for the Electionware software.

• 1 - 10

Electionware Course

Course Length - 41/2 Days

This course of training will provide election personnel general knowledge of the ES&S Electionware election management system. The participant will be able to design ballots, program election hardware and produce general election reports for a basic election.

Pre-Requisite(s):

None

Audience:

eRFI 47800-SOS00000035

New Voting System



August 24, 2018

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Electionware (Results Only) Course

Course Length - 1 Day (Results Only)

This course of training will provide **election personnel** general knowledge of ES&S Electionware software. The participant will be able to produce general election reports for a basic election.

In these Electionware modules, the participant will gain the following knowledge, skills, and abilities:

- Define Open and restore elections.
- Results Generate and display customized election reports in paper or electronic formats, as well as view and manage ballot images captured from ES&S tabulation hardware.
- Manage Manage user account and security access for the Electionware software.
- Media Burn

Pre-Requisite(s):

None

Audience:

- Coding staff
- Number of Participants:
 - 1 10

ES&S CONTINUING EDUCATION & SUPPORT

The ES&S method aims at fully preparing election staff to ensure autonomy in election operations while using our equipment. We understand long-term needs may require a combination of continuing education courses and/or on-site support. These continuing education and site support needs from our experienced training team can be coordinated and tailored to meet Georgia's unique requirements.

https://sos.ga.gov/sites/default/files/2022-03/ess rfi - final - redacted.pdf

37. I am also aware of how to determine if the Cast Vote Records and Ballot Images are on or off for a DS200, in test mode they can be turned off, but during an election, they are on, and voters who insert the ballots as well as election officials know this when the public counters are incrementing.

Scan Ballot

Use the Scan Ballot option to perform a ballot test for the DS200 and the ballot diverter if you are using a ballot diverter. The results will appear in the Reports menu option, located below the Scan Ballot menu option.



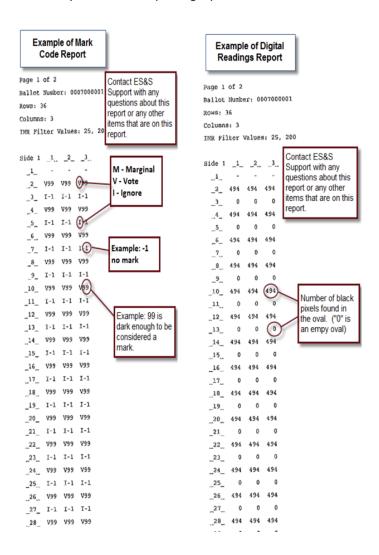
Note: If the election is set up to save no ballot images, the DS200 will not save any ballot images or cast vote records and the public and protected counters will not increment. This is a feature specifically used for hardware testing and should not be used to validate the tabulator's mark detection accuracy during L&A.

https://www.auditelectionsusa.org/documentation-and-manuals-for-ess-ds850s-and-ds200s/

38. Other records that the public should have access to are the Systems Readiness Reports from the ES&S DS450 and SD 850 as well as Mark Code or Digital Readings report.

You can see this is a way to evaluate how sensitive the systems are set to read the

3. Press **Done** when you are finished printing reports.



- 39. Federal Laws have special designations for what is protected under the Freedom of Information Act, there are no carve outs for, or protections for unencrypted election logs, images or reports, in fact the nine exemptions are as follows:
 - a. classified information for national defense or foreign policy
 - b. internal personnel rules and practices
 - c. information that is exempt under other laws

- d. trade secrets and confidential business information
- e. inter-agency or intra-agency memoranda or letters that are protected by legal privileges.
- f. personnel and medical files
- g. law enforcement records or information
- h. information concerning bank supervision.
- geological and geophysical information
- 40. There is no federal law or a temporary classification that has decided that any cast vote record, log files, report is somehow classified.
- 41. In 2023, the Minnesota Legislature passed a new law 206.845, Subd 3., addressing cast vote records, and making them public, with exceptions:
 - Subd. 3. Cast vote records. After the municipal clerk or county auditor has received data from automatic tabulating equipment, textual data from the file is public, with the following exceptions, which are protected nonpublic data under section 13.02:
 - (1) data that indicate the date, time, or order in which a voter cast a ballot;
 - (2) data that indicate the method with which a voter cast a ballot;
 - (3) data files that do not include all ballots east in a precinct;
 - (4) data files that provide data in the order it was generated; and
 - (5) data from precincts in which fewer than ten votes were cast.

Data stored as images are protected nonpublic data under section 13.02.

https://www.revisor.mn.gov/laws/2023/0/62/laws.4.118.0#laws.4.118.0

- 42. Each of these steps and instructions should be part of the process that each election official should already be fulfilling in an effort to determine the accuracy, performance and security of their equipment. The public should by default have access to this work product as evidence of the proper due diligence of the election officials, any effort to not provide such materials should be ground for additional immediate discovery of the performance of the election equipment and the accuracy of all of the ballot questions that went through that county process.
- 43. The inoculation to all conspiracy theories is transparency. The public paid for these machines, through tax dollars, the intent of the US Election Assistance Commission nor the legislature of the State of Minnesota to throw away the spirit of the count shall be public, in fact they required transaction logs, ballot images, and cast vote records, so that the election officials and the public could have proper oversight of the elections as part of their standard when they developed the Voluntary Voting Systems Guidelines 1.0, and we see a further strengthening of those requirements in the new 2.0 standards

just passed last year, that will slowly becoming into effect over the next 12 months. Since the cast vote records are not excluded by the Federal Law, or wholly excluded in Minnesota State Statutes, these records are public and should be released, by all of the counties that currently have the means to provide them, and the other counties should consider ways to have proper oversite of their elections and election equipment, by purchasing the software themselves or working with the SOS office to centralize the reporting functions.

Rick Weible

Z/ZWebl

9/25/2023

803 Elk Street

Elkton, SD 57026