

# The State of Texas



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Roger Williams  
Secretary of State

## REPORT OF REVIEW OF DIEBOLD'S VOTING SYSTEM 1-18-24

### PRELIMINARY STATEMENT

On January 19, 2006, Diebold Election Systems, Inc. (the "Vendor") presented Voting System 1-18-24 for examination and certification. The examination was conducted in Austin, Texas. Pursuant to Sections 122.035(a) and (b) of the Texas Election Code, the Secretary of State appointed the following examiners:

1. Mr. Nick Osborn, an expert in software systems;
2. Mr. Tom Watson, an expert in electronic data communication systems;
3. Mr. Brandon Hurley, an expert in election law and procedure; and
4. Mr. Paul Miles, an expert in election law and procedure.

Pursuant to Section 122.035(a), the Texas Attorney General appointed Dr. Jim Sneeringer, an expert in electronic data communication systems.

The Vendor first demonstrated the system; the examiners then examined its accuracy and security features. Examiner reports on the system are attached hereto and incorporated herein by this reference.

On March 23, 2006 a public hearing was conducted in which interested persons were given an opportunity to express their views for or against certification of the system.

### BRIEF DESCRIPTION OF DIEBOLD'S GEMS VOTING SYSTEM 1-18-24

Diebold's GEMS Voting System 1.18.24 supports both paper ballots and electronic voting. The GEMS software runs on a Microsoft Windows-based computer and is used for election management, tabulation and reporting. With the exception of the Express Poll 2000/4000 and AccuFeed Ballot Feeder, all of the other products listed below are upgrades to previous qualified versions of either hardware and/or software that have been certified for use in the State of Texas and have qualified under the 2002 Voting System Standards.

Component	Version	Description
GEMS	1.18.24	Election Management Software
AccuVote-TSX w/ Ballot Station firmware	4.6.4	Direct recording electronic voting system (DRE) – light weight version
AccuVote-TS R6 w/ Ballot Station firmware	4.6.4	Direct recording electronic voting system (DRE)
AccuVote-OS Optical Scan (Model D)	1.96.6	Precinct or central count scanner
VC Programmer	4.6.1	Application that encodes voter access cards for use on the AccuVote-TSX and TS R6 DREs
Vote Card Encoder	1.3.2	Device to encode voter access cards for the purpose of activating ballots on the AccuVote-TSX and R6 DREs
Key Card Tool	4.6.1	Application to enhance security provided by the AccuVote-TSX and R6 DREs
Express Poll 4000	1.1.5	Tabletop version of an electronic pollbook with the ability to create voter access cards
Express Poll 2000	1.1.5	Handheld version of an electronic pollbook with the ability to create voter access cards
ABasic Report Files 195US.abo	1.15	AccuBasic code resident on the memory card used in AccuVote Optical Scanners and DREs
AccuFeed Ballot Feeder		Mechanical ballot feeding device for AccuVote-OS

NATIONAL ASSOCIATION OF STATE ELECTION DIRECTORS (NASED)  
QUALIFICATION NUMBER

Diebold's GEMS Voting System 1-18-24 was qualified with 2002 Voluntary Voting System Standards (VVSS) by the NASED on June 27, 2005 and October 3, 2005, under the designation N-1-06-22-22-001 and N-1-06-22-22-001, respectively.

FINDINGS

The following are the findings, based on written evidence submitted by the Vendor in support of its application for certification, oral evidence presented at the examination, Texas voting system examiner reports, "Security Analysis of the Diebold AccuBasic Interpreter" report, the Independent Testing Authority (ciber) Source Code Review and Functional Testing dated February 23, 2006, and comments received at the public hearing held on March 23, 2006.

After review of the above information, it has been determined that the Diebold System 1-18-24 can be safely used in Texas elections by following the specific procedures listed in the condition section of this document.

The majority of public comments received requested a Voter Verified Paper Audit Trail (VVPAT) system but discouraged certification of the AccuView Printer Module. The AccuVote-TSX, was reviewed with an optional AccuView Printer Module, which is a VVPAT component. Due to the lack of state and federal legislation that requires the use of a VVPAT, the lack of state standards, concerns about secrecy of the ballot, the optional AVPM is not approved for use in Texas elections at this time.

Both the ExpressPoll 2000 and 4000 are electronic pollbooks. They each have the capability to create voter access cards for use with the AccuVote-TSX and AccuVote TS R6 components of the GEMS system. Currently Texas does not require certification of electronic pollbooks. However, these were reviewed due to their capability to create voter access cards for use with the AccuVote-TSX and AccuVote TS R6 components of the vendor's voting system.

CONDITIONS

General security measures:

- The election official must reset the security key used for all AccuVote TSX and TS R6 units to change the key from the factory default setting prior to programming any units. (This requires the Key Card Tool and Vote Card Encoder.)
- The election official shall maintain control by keeping a perpetual chain of custody record for all of the memory cards used throughout the life of the voting system.
- Each memory card shall have a permanent serial number assigned to it.
- Programmed memory cards shall be stored securely at all times with logged accesses and transfers.
- Immediately after the memory card is installed in the voting equipment, the card shall be sealed with a serialized, tamper-evident seal. The voting station shall not be set into election mode until after the memory card is sealed inside.
- Since there is a door that covers access to the memory card slots and the power switch on both the AccuVote TSX and TS R6 (DRE units), the serialized, tamper-evident seal must be placed directly over the memory card slots available immediately after the memory card is installed. A second seal shall be placed to secure the door prior to transportation to a polling site.
- The county election official must maintain a written log that records which memory cards and which serialized tamper-evident seal(s) are assigned to each DRE and optical scan unit.
- On Election Day and all days of Early Voting, prior to any ballots being cast on any unit, the integrity of the tamper-evident seal must be verified by the presiding judge before opening the compartment containing the memory card and unit power switch. The serial number of the seal must also be verified against the log provided to the presiding judge. This procedure must be witnessed by at least one other election clerk.
- If it is detected that the seal has been broken prior to the unlocking of the compartment, or if there is a discrepancy between the log and the serial number, the discrepancy must be confirmed by the presiding judge and at least one other election clerk, documented, and

immediately reported to the county elections official for the jurisdiction. The elections official shall immediately investigate and determine the appropriate action. If this potential breach occurs in a unit, the specific unit must undergo a full manual recount by printing the cast vote records (ballot images) and comparing them to the electronic results tape from that same unit. A review of the audit log must also be performed to look for any suspicious activity.

- In post-election mode, print the results report prior to removing the memory card from the DRE and/or optical scanner. If the voting equipment is used at the precinct, the results report must be printed at the precinct.
- Also print the audit log from the optical scan unit prior to removing the memory card.
- The county elections officials must train all personnel, including poll workers, regarding proper treatment of memory cards and how to check for problems with seals, as well as how to record any problems discovered and what to do if such problems arise.

Security procedures for Provisional Voting:

- Assign unique provisional ID numbers to each polling site.
- Prepare a peel-off sticker sheet with the unique provisional ID numbers for each of the polling sites.
- Provide instructions for the presiding judge to sign the provisional affidavit and select a sticker with a unique number off the sheet of provisional ID numbers.
- Provide instructions on how to create the voter card with the unique provisional ID number.

Security procedures for GEMS computer:

- GEMS v.1.18.24 software must be operated on a standalone PC or on a network limited to Diebold systems.
- Access to the GEMS server shall be tightly controlled and all persons having access to it at any time shall be pre-approved by the county elections official and noted in a log that details name, time, and purpose of access to the room in which the GEMS is housed.
- The election official shall have a procedure that ensures that default or vendor-supplied passwords have been changed prior to using the Diebold system for an election.

CONCLUSION

Accordingly, based upon the foregoing, I hereby certify the Diebold's GEMS Voting System 1-18-24 for use in elections in Texas, subject to the above conditions.

Signed under my hand and seal of office, this 6 day of July 2006.



BUDDY GARCIA  
DEPUTY SECRETARY OF STATE