

Exhibit I



"Shawn Southworth"
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04/15/2005 05:23 PM

To "Hancock, Brian" <bhancock@eac.gov>
cc
bcc
Subject GEMS 1-18-22 report

Brian,

Here is the latest GEMS 1-18-22 report with the updated TSx.

Thanks,

Shawn



2005-04-15 GEMS 1-18-22 Final Report A9.pdf

Software Functional Test Report

Diebold Election Systems

GEMS 1-18

Original Report Version 1.0 for GEMS 1-18-15 created 1/03/03

Addendum 1 for GEMS 1-18-15 created 3/18/03

Addendum 2 for GEMS 1-18-18 created 7/08/03

Addendum 3 for GEMS 1-18-19 created 2/03/04

Addendum 4 for GEMS 1-18-19 created 5/10/04

Addendum 5 for GEMS 1-18-22 created 7/21/04

Addendum 6 for GEMS 1-18-19 and 1-18-22 created 9/17/04

Addendum 7 for GEMS 1-18-19 and 1-18-22 created 10/05/04

Addendum 8 for GEMS 1-18-22G created 01/26/05

Addendum 9 for GEMS 1-18-22 created 04/15/05

Vendor: Diebold Election Systems

Software: GEMS 1-18

Prepared By: CIBER, Inc.

Test Report
Diebold Election Systems GEMS 1-18-22

Description.....1

Summary of Reports and Addendums.....2

1 DESCRIPTION

Diebold made changes to their AccuVote TSx precinct counter hardware and firmware to incorporate a voter-verifiable paper audit trail printer. These changes were reviewed and tested by the hardware ITA. After completion of this testing by the hardware ITA, CIBER was requested to perform a system level test of the interface between the new AccuVote TSx running 4.6.1 firmware and the previously qualified GEMS 1-18-22.

CIBER performed the following tests:

- ❑ Created Open Primary, Closed Primary, and General Election databases using GEMS 1-18-22
- ❑ Downloaded the databases to the AccuVote TSx
- ❑ Created voter cards and voted the elections
- ❑ Uploaded the results to GEMS
- ❑ Compared GEMS election result reports (Election Summary Reports, Statement of Votes Cast Reports) to the AccuVote TSx reports
- ❑ Reviewed Audit Logs

The successful completion of these tests verified that the GEMS 1-18-22 interface functioned as designed with AccuVote TSx running 4.6.1 firmware.

Summary of Reports and Addendums

The purpose of this summary is to provide a quick reference of the progression of testing that was performed from the original report through all the addendum reports. For specific details please see the appropriate report or addendum.

Original Report Created 01-03-03

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-15 (1990)	AccuVote-OS Precinct counter (Optical Scan) 1.94w (1990) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.13.	GEMS 1-18-15 (1990)	GEMS TDP 1-18-15 (1990)

The original report consisted of full TDP and source code review to the 1990 standards, and a full functional system integration test to 1990 standards.

Addendum 1 Created 03-18-03

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-15 (1990)	AccuVote-OS Precinct counter (Optical Scan) 1.94w (1990) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.14 (1990).	GEMS 1-18-15 (1990)	GEMS TDP 1-18-15 (1990)

Addendum 1 consisted of testing GEMS 1-18-15 with newer versions of the firmware on the AccuVote-TS (which were tested by the hardware ITA). A full functional system integration test to 1990 standards was performed.

Addendum 2 Created 07-08-03

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-18 (1990)	AccuVote-OS Precinct counter (Optical Scan) 1.94w (1990) AccuVote-OS Precinct counter (Optical Scan) 1.96.4 (1990) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.14 (1990) & version 4.3.15 (1990).	GEMS 1-18-18 (1990)	GEMS TDP 1-18-18 (1990)

Addendum 2 reported testing of changes between GEMS 1-18-15 and 1-18-18. These changes included modifications and additions of reports, additional logging capabilities, fixes and additions of import and export utilities, fixes to Ballot viewer and the addition of support for audio. It also added new firmware versions to the test suite for the AccuVote-OS and AccuVote-TS. A full functional system integration test to 1990 standards was performed.

Addendum 3 Created 02-03-04

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-19 Changes from 1-18-18 tested to (2002)	AccuVote-OS Precinct counter (Optical Scan) 1.94w (1990) AccuVote-OS Precinct counter (Optical Scan) 1.96.4 (1990) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.15C*.	GEMS 1-18-19 (1990-2002)	GEMS TDP 1-18-19 (1990 - 2002)

Addendum 3 reported testing of changes between GEMS 1-18-19 and 1-18-19. These changes consisted of additional security features, modified reports, and fixes to problems discovered as a part of Diebold’s internal test process. All source code and TDP changes were reviewed to the 2002 standards. A full functional system integration test to 2002 standards was performed.

*This version of the firmware was used during the full functional system integration test, but was withdrawn from qualification.

Addendum 4 Created 05-10-04

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-19 Changes from 1-18-18 tested to (2002)	<p>AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) Bootloader 1.0.2 (06-07-02) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.15D (1990).</p> <p>AccuVote-TSx precinct counter (Touch Screen) Bootloader 4-16-04 running Windows CE 4.10 (02-05-04) operating system. Firmware Version 4.4.5 (2002)</p> <p>Voter Card Encoder (Spyrus) VCE 1.3.2 (2002)</p>	<p>GEMS 1-18-19 (1990-2002)</p> <p>Key Card Utility 1.01 (2002)</p>	<p>GEMS TDP 1-18-19 (1990 - 2002)</p> <p>Key Card Utility Users Guide (2002)</p>

Addendum 4 reported testing GEMS 1-18-19 with the newer version of firmware for the AccuVote-TS R6 and the AccuVote-TSx, testing GEMS with the Voter Card Encoder and testing the Key Card Utility. All functional system integration testing was performed to the 2002 standards. All changes and additions to the source code and TDP were reviewed to the 2002 standards. The base version of GEMS 1-18-19 did not change from the previous qualification.

Addendum 5 Created 07-21-04

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-22 Changes from 1-18-19 tested to (2002)	<p>AccuVote-OS Precinct counter (Optical Scan) 1.94w (1990)</p> <p>AccuVote-OS Precinct counter (Optical Scan) 1.96.4 (1990)</p> <p>AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.3.15D</p> <p>AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.5.1</p> <p>AccuVote-TSx precinct counter (Touch Screen) Bootloader 4-16-04 running Windows CE 4.10 (02-05-04) operating system. Firmware Version 4.4.5 (2002)</p> <p>Voter Card Encoder (Spyrus) VCE 1.3.2 (2002)</p>	<p>GEMS 1-18-22 (1990-2002)</p> <p>Key Card Utility 1.01 (2002)</p>	<p>GEMS 1.18 User Guide 1-18 Revision 11 (1990 - 2002)</p> <p>GEMS 1.18 Election Administrator Guide Revision 5.0 (1990 - 2002)</p> <p>GEMS 1.18 Reference Guide Revision 6.0 (1990 - 2002)</p> <p>Change Release Notes</p>

Addendum 5 reported testing the changes from GEMS 1-18-19 to 1-18-22. All source code and TDP changes were reviewed to the 2002 standards. Functional testing consisted of testing GEMS 1-18-22 with the AccuVote-OS, testing GEMS with the newer version of firmware for the AccuVote-TS R6 and the AccuVote-TSx, testing GEMS with the Voter Card Encoder, and testing GEMS with the Key Card Utility.

Addendum 6 Created 09-16-04

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-19 and GEMS 1-18-22 tested with new devices (2002)	AccuVote-OS Central Counter (Optical Scan) 2.0.12(2002) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.5.1 VCProgrammer 4.1.11	VCProgrammer 4.1.11 (2002)	VCProgrammer 4.1 Technical Data Package (2002) AccuVote-OS Central Count 2.0 Technical Data Package (2002)

Addendum 6 reported testing GEMS 1-18-19 and GEMS 1-18-22 with the VCProgrammer and the AccuVote-OS running firmware revision 2.0.12. All functional system integration testing was performed to the 2002 standards. The source code and TDP for the VCProgrammer and the AccuVote-OS were reviewed to the 2002 standards. The base versions of GEMS 1-18-19 and 1-18-22 (1990) did not change from the previous qualification.

Addendum 7 Created 10-05-04

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-19 and GEMS 1-18-22 tested with new devices (2002)	AccuVote-OS Central Counter (Optical Scan) 2.0.12(2002) AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.5.2	VCProgrammer 4.1.11 (2002)	VCProgrammer 4.1 Technical Data Package (2002) AccuVote-OS Central Count 2.0 Technical Data Package (2002)

Addendum 8 Created 01-26-05

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-22G	AccuVote-TS Precinct Counter Rev 6 Version 1.0.2 (Touch Screen) running Windows CE3.0, 8/08/02 operating system. Firmware version 4.5.2	GEMS 1-18-22G	

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Addendum 9 Created 04-15-05

Integration Test Suite	Hardware	Source Code	TDP
GEMS 1-18-22	AccuVote-TSx precinct counter (Touch Screen) Bootloader BLR7-1.2.1 running WCER7-410.2.1 Firmware Version 4.6.1 (2002)	GEMS 1-18-22	

Summary

The following is a list of all the latest components that have been tested and recommended for qualification for the most current version of the system suite:

GEMS 1-18-19

GEMS 1-18-22

GEMS 1-18-22G

AccuVote-OS Precinct Counter (Optical Scan) 1.94w (1990)

AccuVote-OS Precinct Counter (Optical Scan) 1.96.4 (1990)

AccuVote-OS Central Count (Optical Scan) 2.0.12 (2002)

AccuVote-TS R6 Precinct Counter Firmware version 4.3.15D (1990)

AccuVote-TS R6 Precinct Counter Firmware version 4.5.2 (2002)

AccuVote-TSx Precinct Counter Firmware Version 4.5.2 (2002)

AccuVote-TSx Precinct Counter Firmware Version 4.6.1 (2002)

Voter Card Encoder (Spyrus) VCE 1.3.2 (2002)

Key Card Utility 1.01 (2002)

VCProgrammer 4.1.11(2002)

GEMS 1.18 User Guide 1-18 Revision 11 (1990 - 2002)

GEMS 1.18 Election Administrator Guide Revision 5.0 (1990 - 2002)

GEMS 1.18 Reference Guide Revision 6.0 (1990 – 2002)