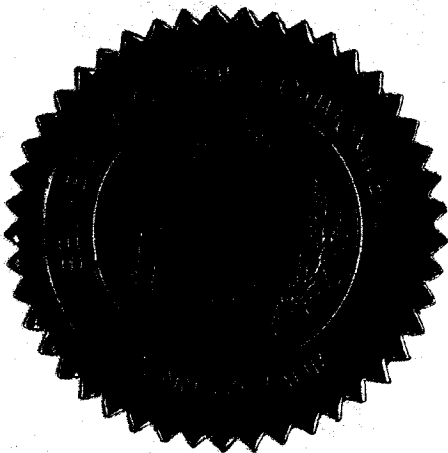


COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF STATE
EXAMINATION RESULTS OF
ACCUPOLL, INCORPORATED
ACCUPOLL DIRECT RECORDING
ELECTRONIC VOTING SYSTEM, VERSION 2.50



Issued by:

Pedro A. Cortés

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Secretary of the Commonwealth
August 4, 2005

**EXAMINATION OF ACCUPOLL, INCORPORATED
ACCUPOLL DIRECT RECORDING ELECTRONIC VOTING SYSTEM**

**A REPORT BY THE SECRETARY
OF THE COMMONWEALTH OF PENNSYLVANIA**

I. INTRODUCTION

Article XI-A of the Pennsylvania Election Code, 25 P.S. § 3031.1 *et seq.* authorizes the use of electronic voting systems. Section 1105-A of the Election Code, 25 P.S. § 3031.5 requires all electronic voting systems to be examined and approved by the Secretary of the Commonwealth before use in any election in Pennsylvania.

Upon the request for an examination of the AccuPoll Direct Recording Electronic Voting System (hereinafter referred to as "System") made by AccuPoll, Incorporated, and the receipt of the required \$3,000.00 examination fee in the Department of State's Bureau of Commissions, Elections, and Legislation, the Department contacted AccuPoll and scheduled an examination of the System for Tuesday, February 15, 2005.

Michael I. Shamos, Ph.D., J.D. was retained by the Secretary of the Commonwealth as an expert to conduct this electronic voting system examination. Monna Accurti, Commissioner of the Bureau of Commissions, Elections, and Legislation; Patrick Williams, Help America Vote Act Specialist; and Adam Yake, Elections Administrative Assistant represented the Secretary of the Commonwealth.

II. THE ACCUPOLL DIRECT RECORDING ELECTRONIC VOTING SYSTEM

The System is a touchscreen direct recording electronic system with a voter verified paper audit trail (VVPAT) capability. The following paragraphs in this section briefly describe the functions of the System as summarized by the vendor.

The system is comprised of three main components:

1. County Level – The Election Management System (EMS), which is used for ballot design and computation.
2. Precinct Level – The Voting Administrative Workstation 1000, Version 2.50¹ (VAW), which is used for operating voting stations.
3. Precinct Level – The AVS 1000 Voting Station, Version 2.50² (AVS), which is the device used by voters to cast votes.

County

At the county level, election officials design the election using AccuPoll Ballot Builder software. Once an election has been created by Ballot Builder it is burned onto a write-once CD (the system will not allow a user to burn this information on a rewritable CD). County employees then load the election onto the VAW.

Precinct

At the precinct, the AVS stations are activated while connected to the VAW. Each AVS is then loaded with an XML file for each ballot style used in that precinct. The ballot styles on the VAW must match the ballot styles on each AVS prior to operation.

Once the ballot has been designed and equipment has been distributed to precincts in accordance with the procedures outlined by the manufacturer, the polls have been opened, and a zero tape has been printed, voters may proceed to cast their ballots.

The ballot is displayed on the touch screen, usually on multiple pages. The voter can select the appropriate screen by touching the appropriate page box on the screen, and select their chosen candidate by touching the candidate's box on the screen illuminating the candidate's name while a checkmark appears next to his/her name. The selected candidate's name remains illuminated until the voter selects another page, or deselects the candidate's name by touching the candidate's box again. The voter may write in a

¹ While AccuPoll initially submitted version 2.47 to the Department for review on February 15, 2005, its approval with the Independent Testing Authority (ITA) was pending. Based on recommendations made by the ITA in 2005, AccuPoll updated its system, and it became Version 2.50. On July 21, 2005, AccuPoll appeared before the Department of State staff for a demonstration to ensure Version 2.50 met all of the requirements of the Pennsylvania Election Code. Thus, the version approved for use in this report is Version 2.50.

² *Id.*

candidate's name by touching the write-in box and spelling the name out on the keyboard that appears on the screen.

After the voter has completed voting, a review screen appears listing all of the candidates selected by the voter for each office. The voter can then change a selection(s), or cast his/her vote. Once the voter has cast his/her vote electronically, the AVS will print a VVPAT for the voter to review. The voter may review the names on the VVPAT, or he/she may scan the barcode on the VVPAT and listen to the names using headphones. Once the voter is satisfied the VVPAT accurately represents his/her choices, he/she must insert the VVPAT into a ballot box as instructed by the election officials.

It is important to note that the System is also capable of conducting an election without enabling the VVPAT function.

Voters may also use the System to cast a provisional ballot. When an individual casts a provisional ballot using this System, an electronic copy of the ballot is captured, kept separate from all other ballots, and is not tallied with other ballots unless it is done so by an authorized county election official after the polls have been closed and results sent to the county office. The System's printer provides the individual with a copy of the ballot. The printed copy must be inserted into a secrecy envelope and then sealed in an affidavit envelope in accordance with the Election Code. The ballot is then counted based on the decision of the County Board of Elections after the election. Please see section IV of this report for more information and directives concerning the use of provisional ballots with this System.

When all voters are finished voting, the polls are closed at the VAW. At that point, the results from all the AVS units, which have been stored in the VAW's database, are written to a write-once encrypted CD. Results can also be printed at the precinct using a printer from one of the AVS units, which are then signed by the judges as official returns.

County

The CDs from the precincts are returned to the county, and are inserted into the Consolidator and then sent to the Central Count Server.

III. EXAMINATION PROCEDURES AND RESULTS

The examination was conducted to test for the statutory requirements specified in section 1107-A of the Election Code, 25 P.S. § 3031.7. The vendor demonstrated the setup, voting, close of polls, and election night tabulation features of the System. The expert asked questions of the vendor and requested demonstrations of various features before conducting the Pennsylvania Standardized Test. The Test is a set of 12 ballots, and is designed to ensure the electronic voting system's compliance with the Election Code. The System accurately tabulated the results of the Test.

The VVPAT capability and accompanying procedures pose the following concerns for compliance with the Election Code:

1. Currently, there is no federally qualified method for the vendor to ensure that VVPAT is not removed from the polling place. The possibility that a VVPAT could be removed from the polling place without extraordinary effort is a violation of section 1107-A(10) of the Election Code, 25 P.S. § 3031.7(10), which provides for "acceptable ballot security procedures" to prevent voter fraud in the form of vote buying. The vendor is updating its system to include a scanner that will log in VVPATs and plans to submit it to the relevant independent testing authorities (ITAs) for approval. Once it obtains approval from the relevant ITAs, AccuPoll may return to the Department for an examination of the System with the scanner to ensure it meets the standards for electronic voting systems set forth in the Pennsylvania Election Code. After that examination, the Secretary will furnish a report.
2. Additionally, the VVPAT contains a unique ballot key that constitutes an identifying mark in contradiction to section 1223 of the Election Code, 25 P.S. §3063(a). The vendor is updating its system to address this problem and plans to submit it to the relevant ITAs for approval. Once it obtains approval from the relevant ITAs, AccuPoll may return to the Department for an examination of the System with the VVPAT to ensure it meets the standards for electronic voting systems set forth in the Pennsylvania Election Code. After that examination, the Secretary will furnish a report.

IV. CONCLUSIONS

Based on the results of the examination conducted on February 15, 2005 and the subsequent demonstration on July 21, 2005, the AccuPoll Direct Recording Electronic Voting System, Version 2.50 meets the minimum requirements of the electronic voting provisions of the Pennsylvania Election Code. Therefore, it is approved for use in the Commonwealth of Pennsylvania, **provided it is implemented with VVPAT capability disabled in order to nullify the concerns listed in section III of this report.** The System will accommodate no more than 350 voters per unit.

Additionally, the System may be used to cast provisional ballots as mentioned in section II of this report. However, the Election Code requires all provisional ballots to be paper ballots. Therefore, in order to comply with the Election Code, the paper record that is printed when an individual casts a provisional ballot will become the official ballot. **The electronic record of the provisional ballot must not be added to the tally at any time. The votes for all provisional ballots that will be counted must be manually added using the printed paper record the voter sealed in the secrecy envelope.** Although the VVPAT capability must not be used for non-provisional ballots as stated above, individuals casting provisional ballots will be able to obtain a printed paper record.

Should the vendor receive certification from a federally qualified ITA for changes to the System that would bring the VVPAT into compliance with the Election Code, it will be permitted under section 1105-A(d) of the Election Code, 25 P.S. § 3031.5(d) to request an examination of the System with the changes.

In addition, pursuant to the Directive on Electronic Voting Systems issued by the Secretary of the Commonwealth on March 17, 2005 and to section 1105-A(d) of the Pennsylvania Election Code, 25 P.S. § 3031.5(d), this certification is valid only for the voting system examined on February 15, 2005 and demonstrated on July 21, 2005. If the vendor makes *any* changes to the system subsequent to the date of its examination, it must *immediately* notify both the Pennsylvania Department of State and the relevant ITAs. Failure to do so can result in the decertification of this voting system in the Commonwealth of Pennsylvania.

All jurisdictions implementing this System for use must comply with any directives issued by the Secretary of the Commonwealth regarding the use of this system in accordance section 1105-A(a-b) of the Election Code, 25 P.S. § 3031.5(a-b).