



**U.S. ELECTION ASSISTANCE COMMISSION**  
**OFFICE OF INSPECTOR GENERAL**  
**1225 New York Ave. NW - Suite 1100**  
**Washington, DC 20005**

December 31, 2007

To: Donetta Davidson  
Chair, U.S. Election Assistance Commission

From: Curtis W. Crider  
Inspector General

Subject: Investigation of Allegations of Fraudulent Certification of Election Equipment  
by SysTest Labs, Incorporated

This memorandum transmits an Investigative Report entitled "Fraudulent Certification of Election Equipment." The Department of the Interior, Office of Inspector General, conducted the investigation at my request because the Election Assistance Commission (EAC), Office of Inspector General, has no investigators.

I requested the investigation based on an anonymous complaint that that SysTest Labs, Incorporated, had falsified the initial and re-certifications of the AutoMark Technical Systems, LLC, Voter Assist Terminal. The complainant alleged that the false certifications were the result of SysTest allowing AutoMark owners and employees of AutoMark to participate and manipulate data in what was supposed to be independent testing. The complainant also alleged that Ricoh Electronics, Inc., the manufacturer of the AutoMark Voter Assist Terminal, and Diebold Election Systems, Inc., which had recently partnered with AutoMark, were knowingly distributing inferior AutoMark Voter Assist Terminals. Consequently, the allegation indicated that funds provided under the Help America Vote Act may have been used to purchase equipment that was improperly certified by SysTest Labs.

The investigation determined that the initial and re-certifications of the AutoMark Voter Assist Terminal by SysTest were conducted in accordance with the National Association of State Election Directors program. Also, the investigation found no evidence indicating that SysTest Lab or AutoMark employees fabricated test data even though AutoMark employees were present and left unattended for short periods of time while the Voter Assist Terminal was being tested. Finally, the investigation did not develop any evidence that supported the allegation that Ricoh and Diebold distributed inferior AutoMark Voter Assist Terminals.

In response to our concerns about manufacturer access to voting equipment during testing, the EAC included in its draft manual “Voting System Test Laboratory Accreditation Program Manual (Manual) the following language:

- 2.11.1 Testing Independence. Consistent with the requirements of this Manual, only the VSTL identified on a voting system’s application form may test or oversee the testing of that system. Under no circumstances may a manufacturer perform or participate in any testing which will serve as the basis of an EAC certification. Additionally, VSTL’s shall ensure that manufactures’ do not have access to a system under test unless accompanied and monitored by a VSTL representative.

We believe that the changes in the Manual adequately address our concerns. Therefore, no response to this memorandum is required. However, if you have any questions or concerns about this report, please do not hesitate to contact me at (202) 566-3125.



**United States Department of the Interior  
Office of Inspector General**

**REPORT OF INVESTIGATION**

<b>Case Title</b> Fraudulent Certification of Election Equipment	<b>Case Number</b> [Ex. 2]
<b>Reporting Office</b> Program Integrity Division	<b>Report Date</b> November 14, 2007
<b>Report Subject</b> Closing Report	

**SYNOPSIS**

This investigation was initiated based on an anonymous written complaint received by the U.S. Election Assistance Commission (EAC) alleging that SysTest Labs, Incorporated, had falsified the initial and re-certifications of the AutoMark Technical Systems, LLC, Voter Assist Terminal. The complainant alleged that the false certifications were the result of SysTest allowing AutoMark owners and employees of AutoMark to participate and manipulate data in what was supposed to be independent testing. The complainant also alleged that Ricoh Electronics, Inc., the manufacturer of the AutoMark Voter Assist Terminal, and Diebold Election Systems, Inc., which had recently partnered with AutoMark, were knowingly distributing inferior AutoMark Voter Assist Terminals.

Although the National Association of State Election Directors (NASED) program that was in place at the time permitted controlled vendor presence during testing, we found that AutoMark employees had been left unattended for short periods of time while the Voter Assist Terminal was being tested. We found no evidence indicating that SysTest or AutoMark employees fabricated test data.

Our investigation determined the initial and re-certifications of the AutoMark Voter Assist Terminal by SysTest were conducted pursuant to then prevailing NASED standards. We did not develop any evidence that supported the allegation of fraudulent testing or of the distribution of inferior AutoMark Voter Assist Terminals by Ricoh and Diebold.

**BACKGROUND**

The Help America Vote Act (HAVA) of 2002 (Public Law 107-252) was enacted to provide funds to states to replace punch card and lever action voting systems and to establish the EAC to assist in the administration of federal elections. The EAC is charged with developing guidance to meet HAVA

Reporting Official/Title   Ex. 6 and 7(C)/Investigator	Signature
Approving Official/Title   Alan F. Boehm/Director, Program Integrity Division	Signature /s/
Authentication Number: 00000000000000000000000000000000	

This report contained information that has been redacted pursuant to 5 U.S.C. §§ 552(b)(2), (b)(6), and (b)(7)(C) of the Freedom of Information Act and 5 U.S.C. § 552a(k)(2) of the Privacy Act. Some references indicating gender are written in the masculine form to protect the identities of individuals and to facilitate the reading of the report. Supporting documentation for this report may be requested by sending a written request to the EAC Inspector General.

requirements, adopting voluntary voting system guidelines, and serving as a national clearinghouse of information about election administration. EAC also accredits testing laboratories and certifies voting systems. EAC established statewide voter registration systems, provided for provisional voting, and provided for polling place access for disabled voters among other accomplishments. Additionally under HAVA, the National Institute of Standards and Technology (NIST) will assist the EAC through its National Voluntary Laboratory Accreditation Program (NVLAP) and will provide recommendations to the EAC regarding laboratory accreditation.

Prior to the passage of HAVA, voting systems were assessed and qualified by NASED, a nonpartisan association consisting of election directors nationwide. NASED did not receive any federal funds to operate its program.

During the establishment period of the EAC, and in order for certification of voting systems to continue, interim laboratory certification was granted to SysTest and Wylie Laboratories, Inc. by the EAC based on a review of their NASED certifications. The EAC did not extend an interim certification to CIBER, Inc., which was NASED certified, based on concerns the EAC noted during their review process. The testing and certification program within the EAC and NVLAP became operational in January 2006.

In addition to addressing several other voting issues, HAVA mandated a voting system for individuals with disabilities through the use of at least one direct recording electronic voting system or other voting system at each polling place that is equipped for individuals with disabilities.

It was the HAVA that motivated AutoMark owners, [Ex. 6 and 7(C)], to pursue developing a voter assist terminal that met the HAVA criteria. Following the AutoMark prototype development, AutoMark selected Ricoh Electronics to manufacture the AutoMark Voter Assist Terminal. AutoMark in partnership with Election Systems and Software, Inc. (ES&S), a company already established within the voting equipment industry, developed and marketed the AutoMark Voter Assist Terminal specifically for individuals with disabilities. The ES&S scanners were capable of tabulating the ballots voted on the AutoMark Voter Assist Terminal as well as ballots manually voted.

The Voter Assist Terminal developed by AutoMark is equipped with a touch screen with a zoom and contrast feature, multiple language translation, a keypad marked with Braille, puff-sip interface, as well as an audio ballot feature. The voter can use all of these features separately or simultaneously.

### **DETAILS OF INVESTIGATION**

On March 1, 2007, the EAC Office of Inspector General received an anonymous typed letter, post marked February 27, 2007. The anonymous writer alleged SysTest, a federally certified independent testing authority for election equipment, had fraudulently certified equipment manufactured by AutoMark Technical Services.

The allegations within the anonymous complaint were reviewed and summarized as follows: A key part of the initial AutoMark certification process was the accuracy test. This test required that one million plus ballot positions be marked without error by the AutoMark Voter Assist Terminal. SysTest personnel allowed AutoMark owners and employees unfettered laboratory access during testing, in what was supposed to be independent testing. The participation of AutoMark personnel, primarily during the accuracy testing phase, ensured the Voter Assist Terminal was certified. During the subsequent re-certification, the same fraudulent data was used to re-certify AutoMark hardware and

software updates with no additional testing being conducted. Ricoh Electronics, Inc., the manufacturer of the AutoMark Voter Assist Terminal, and Diebold Election Systems, Inc., which had recently partnered with AutoMark to develop a voting system, were aware of the fraudulent testing and knowingly distributed inferior AutoMark Voter Assist Terminals. AutoMark transferred its testing requirements from CIBER to SysTest because CIBER was too thorough in enforcing the federal certification testing standards. When a former SysTest employee tried to hold the testing to standard, his employment was inexplicably terminated.

In order to establish a benchmark of voter equipment testing protocols, we interviewed the Director, Voting Systems Certification, EAC, and a Senior Program Manager, Information & Technology Security Testing, NIST, NVLAP.

According to the Director, Voting Systems Certifications, EAC, manufacturer representatives are allowed to be present during election equipment certification, particularly when hardware tests are being conducted. The purpose of manufacturer presence is to troubleshoot an error code that may occur during the certification of the election equipment, as it is easier for a manufacturer to troubleshoot their own equipment. The information addressing the error codes would be reflected in the final certification report. The Director said, when software is being certified, it is not necessary for the manufacturer to be present as it is only the coding of the software that is being reviewed for accuracy.

Like the Director, the NVLAP Program Manager did not find it unusual for a voting equipment manufacturer like AutoMark to be present during laboratory testing of their voting equipment as long as manufacturer personnel were controlled. The purpose of manufacturer presence would have been to assist in troubleshooting any equipment malfunction experienced by a laboratory technician. The NVLAP Program Manager emphasized that it was important to control the actions of the manufacturer's personnel during testing. The NVLAP Program Manager said if the manufacturers of voting equipment were going to be allowed to vote test ballots, as alleged in the anonymous complaint, then those ballots and the process needed to be closely monitored by the laboratory tester. The NVLAP Program Manager advised that during the accreditation process, laboratory testers needed to establish complete control of voting equipment manufacturers to avoid compromising the testing process.

Upon evaluating the anonymous complaint and the collected background information, we focused our investigation towards conducting interviews of SysTest and AutoMark personnel affiliated with the testing. We also evaluated the allegations that the anonymous complainant made against Ricoh Electronics and Diebold Election Systems.

### ***SysTest Personnel:***

A key part of the AutoMark software testing involved the accuracy test, wherein the AutoMark Voter Assist Terminal was required to mark 1.5 million ballot positions without a single error. The majority of the allegations within the anonymous complaint were related to the accuracy test, which was conducted at the SysTest facility in Denver. Prior to the accuracy test, the AutoMark Voter Assist Terminal hardware was subjected to various environmental tests at Percept Technology Labs, Inc. in Boulder, Colorado, which was the certified hardware test facility for SysTest.

We interviewed a senior official at SysTest Labs who stated that AutoMark employees assisted in voting the test ballots that were used in the accuracy test. Their participation was allowed to reduce

\$60,000 in AutoMark testing costs. The senior official stated NASED policies, where possible, encouraged reducing the financial burden to the manufacturers.

According to the senior official and four other SysTest employees who were interviewed, it was not unusual for manufacturers to be present during testing of voter equipment. However, SysTest employees would have closely monitored any manufacturer presence. SysTest employees, who participated in parts of the AutoMark testing, acknowledged that the participation of AutoMark personnel was supervised by SysTest personnel.

A senior official at SysTest Labs said that, in the fall of 2005, AutoMark submitted updated software and hardware versions to SysTest for retesting. This meant that the hardware and software previously certified by SysTest had been enhanced and was not a complete revision of the original version. Consequently, complete retesting of previously certified software and hardware was not applicable. A determination regarding the extent components of previously tested software and hardware would be tested was accomplished through regression testing. The regression testing conclusions would be included in the test report submitted to NASED.

A senior official at SysTest Labs described the former SysTest employee mentioned in the anonymous complaint as an individual who did not hesitate to hold manufactures to the prescribed standard. This opinion was echoed by the interviewed SysTest employees who knew the former employee. The senior official said he respected the former SysTest employee's technical expertise and had never overruled any of his testing decisions. The senior official acknowledged that the former employee had left SysTest based on their management differences.

We interviewed the former SysTest program manager, who was now [Ex. 6 and 7(C)]. The former employee explained that AutoMark and ES&S started its NASED accreditation process with CIBER, Inc. (a NASED software certified laboratory) and Wylie Laboratories, Inc. (a NASED hardware certified laboratory). During this period, Wylie lost a key employee and was not able to complete its part of the testing. As a result, AutoMark solicited an opinion from NASED and was allowed to complete the required testing of the Voter Assist Terminal through SysTest without having to re-start the certification process from the beginning.

The former SysTest program manager recalled that AutoMark management, particularly a high-level AutoMark official, was opposed to SysTest conducting the accuracy test wherein 1.5 million ballot positions had to be accurately marked based on a known test election outcome. It was the position of the AutoMark official that the Voter Assist Terminal was a ballot marker and not a vote tabulator; therefore, the accuracy test requiring 1.5 million ballot positions be marked was not applicable to the AutoMark Voter Assist Terminal. Ultimately, the accuracy test was conducted, and AutoMark was allowed to use AutoMark employees to vote the ballots required for the accuracy test in order to reduce AutoMark testing costs. The former SysTest program manager said that the presence of AutoMark personnel, who voted the ballots during the accuracy test, was controlled by SysTest employees and allowed under NASED rules. The former SysTest program manager said the test ballots were handed to AutoMark employees in controlled batches with the pre-established voting parameters. Once voted, the AutoMark employees would return the ballots to SysTest personnel, who would tabulate the ballots on the ES&S scanners. The former SysTest program manager related the AutoMark personnel were also allowed to conduct user level preventive maintenance during testing as outlined in the AutoMark operating manual.

The former SysTest employee emphasized that the initial certification involving the accuracy testing of

the AutoMark Voter Assist Terminal was his project and was conducted in accordance with the NASED program.

The former SysTest program manager said the main reason he resigned from SysTest was because of pay issues and differences in management style between a Senior SysTest official and himself.

***AutoMark Personnel:***

In the fall of 2004, AutoMark and ES&S started the certification process with CIBER, Inc. and Wylie Laboratories, Inc. A high-level official at AutoMark described the certification process as slow with CIBER and Wylie. Sometime during the fall of 2004, Wylie was unable to continue testing, and AutoMark had to complete the certification process through SysTest. The high-level AutoMark official found SysTest to be very thorough, timely, and, compared to CIBER, a much more stringent laboratory through which to get certified. The high-level official related that SysTest completed its initial testing in June 2005. Although he had initially objected to some of the testing, in the end he felt that the testing assisted AutoMark in improving the Voter Assist Terminal.

During the certification process with SysTest, the high-level AutoMark official acknowledged having several disagreements with the program manager at SysTest for the AutoMark testing. All of their significant disagreements were submitted to the NASED for a neutral opinion, and all of the NASED rulings sided with SysTest.

The biggest disagreement the high-level AutoMark official had with the SysTest program manager and SysTest concerned the accuracy test. The AutoMark official related that this test actually turned into a 3 million ballot mark requirement because they had to test a ballot with oval markings and one with arrow style markings. He expressed his objection to the testing because the AutoMark Voter Assist Terminal was a ballot marking device and not a tabulating device. Ultimately, he agreed to the testing and, in order to reduce test costs, he asked and was allowed to provide his employees to vote test ballots on the Voter Assist Terminal in support of the accuracy test. The AutoMark official related that he went to SysTest in Denver during the last week of the testing and assisted in voting ballots in order to give some of his employees some relief.

Four additional AutoMark engineers and senior officials, who were interviewed, stated that the testing conducted at SysTest was more stringent than the testing they had experienced at CIBER. The AutoMark employees recalled the former SysTest program manager as an individual who held the project to the established standards.

One test engineer estimated that during the two-week period in which AutoMark personnel voted test ballots on the Voter Assist Terminal at SysTest, SysTest personnel were in the room about 50 percent of the time. The door to the test room was always open when SysTest personnel stepped out, and SysTest personnel could always unexpectedly return to the room, as the ES&S optical scanners that tabulated the ballots were in the same room. Two senior AutoMark officials corroborated the test engineer's statement regarding SysTest employee presence during testing. Additionally, the test engineer stated that, during the hardware testing at Percept, he was allowed to feed ballots through the AutoMark Voter Assist Terminal and was monitored by test personnel approximately 90 percent of the time. The test engineer was the only AutoMark employee who participated in the Percept hardware testing. He stated the Percept test room was of clear glass construction thereby reducing privacy. Percept personnel could walk in at any time during the period he was left alone. The test engineer said the AutoMark machine has an internal feature much like a copier that prints and records error reports.

The test engineer said this feature would have been difficult to circumvent without notice.

During our interview of the senior official at SysTest, an examination of the SysTest room was conducted. A multi-shelved double door wall locker within the room was completely full of ballots affiliated with the AutoMark accuracy testing. A cursory check of the contents of the wall locker verified the contents were marked test ballots related to the AutoMark accuracy test.

***Ricoh Electronics and Diebold Election Systems Allegations:***

Although the anonymous complaint primarily addressed fraudulent certification practices by SysTest and AutoMark personnel during testing of the AutoMark Voter Assist Terminal, the complaint also made specific allegations against Ricoh and Diebold: Ricoh was aware that SysTest had falsely certified the AutoMark Voter Assist Terminal and still continued to manufacture inferior AutoMark Voter Assist Terminals. AutoMark had entered into a separate agreement with Diebold to continue distributing inferior AutoMark Voter Assist Terminals.

Our interviews of SysTest and AutoMark employees did not disclose any evidence substantiating that SysTest had falsely certified data to certify the AutoMark Voter Assist Terminals as alleged. Additionally, we did not develop any information that Ricoh was involved in the SysTest certification process of the AutoMark Voter Assist Terminal.

One AutoMark employee [Ex. 6 and 7 (C)] described Ricoh as a company that was very concerned with quality control of products they manufactured. This concern had caused backlogs in AutoMark meeting its delivery commitments to customers. For example, he stated that Ricoh personnel would not distribute a shipment if a packaged AutoMark Voter Assist Terminal shipment if a minor accessory was found missing during the quality control check phase. He said he assisted in mediating a quality control process with Ricoh to avoid shipment delays, while still maintaining the quality concerns of Ricoh.

During our interview with a high-level AutoMark official, he stated that initially AutoMark had signed an exclusive 18-month agreement with ES&S to distribute the AutoMark Voter Assist Terminal as part of the ES&S voting system. The agreement terminated on December 22, 2006. Since then, AutoMark had entered into a joint venture with Diebold to be certified as a voting system. At the time the anonymous complaint was received, the AutoMark and Diebold election voting system was still pending SysTest certification.

**DISPOSITION**

Our investigation did not corroborate any of the allegations made by the anonymous writer. We did identify that during testing AutoMark employees were left unattended for short periods of time at SysTest testing locations. There was no evidence that test data was fabricated or altered. A copy of this report was provided to the Office of Inspector General, EAC, for any action deemed appropriate.