

Alameda County Overhauls Manual Election Process with ABBYY® FormReader™ Enterprise Edition



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- Matt Paul, Alameda County Infrastructure Services Manager.

Alameda County occupies most of the East Bay region of the San Francisco Bay Area in California and has 803,000 registered voters. During the historic 2008 presidential election in which Barack Obama beat John McCain, voter turnout swelled to a record 78 percent.

Preparing for Historic Voter Turnout

In preparation for record voter turnout, the Alameda County Registrar added 30 additional polling stations, increased the number of poll workers at each location and provided twice as many ballots as usual. He also ordered the overhaul of the Registrar of Voters (ROV) roster book verification system.

“The roster book,” explained Darwin Chavez, Technical Support Analyst for Alameda County’s Information Technology department, “is signed by voters to indicate they voted at a certain precinct during election time.” There are 12 names on each page of the 150-page roster book, each corresponding to an identification number in a barcode. An ROV worker previously scanned each ID number with a handheld Wanda barcode reader, then downloaded the information into a set of .TXT lists, which were then imported to DIMS, the state voter database. “During a non-presidential election, this process previously took two weeks and 12 to 15 employees.”

Mr. Chavez’s supervisor, Matt Paul, Alameda County Infrastructure Services Manager, said the impending historic election and anticipated large turnout numbers prompted the county IT department to find a better solution. “There was no way we could get the roster component done in time with the current system,” Mr. Paul said.

Company: Alameda County Registrar of Voters

Web: <http://www.acgov.org/rov/>

Location: Oakland, CA.

Result: Revamped two-week-long voter roster book processing project to 16.5 hours

Products: ABBYY® FormReader™ Enterprise Edition, Fujitsu FI-5900C scanners, WiseTrend CSV-to-Wanda converter

Finding An Automated Solution

Six months prior to the November 2008 election, the Alameda County IT team began its search for an automated solution. With the help of value-added reseller, Ilya Evdokimov of WiseTrend, they found it in ABBYY's FormReader Enterprise Edition. "They showed me the original roster book page, reviewed the original process, and explained what they wanted in the new process," said Mr. Evdokimov. "During the investigation phase, I always give them two options: this is what the software can do out of the box, and this is what we can do with custom development." While the Alameda County team was pleased with what the software could do, they wanted a little customization, such as changing the way they named saved images. Mr. Evdokimov also wrote a .CSV to Wanda converter so that the data from the roster books could be easily imported into the state voter database.

"This team is very knowledgeable," Mr. Evdokimov said. "They knew what they wanted; they questioned the results and were always pushing the process forward. If they saw a possibility to shave some time from the process, they would ask the right questions of the software, and all possible solutions were examined."

Using FormReader As An Overall Workflow

Mr. Evdokimov explained that the county's use of FormReader Enterprise Edition was unique. "In this case, FormReader was not being used in the classic forms processing and data capture way. Instead, it was used as an overall workflow for automation and rule-checking against the overall structure of the form."

Mr. Chavez explained the entire anticipated process on election night. For each of the 831 spiral bound roster books, the poll workers would insert tabs to separate them alphabetically. They would then remove the coils, cut off the tabs, remove two colored sheets, binder clip the remainder of the book and bring it to a scanning station. Each book would then be scanned with one of two Fujitsu FI-5900C scanners.

After scanning, the information would go to FormReader's recognition station, where the system would look at three distinct areas for each voter: a bubble to the left of the voter's name, the voter's signature and a barcode: all on the same line. FormReader would then flag questionable items, such as a dot in the bubble (rather than a completely filled-in bubble), and would also conduct logic checks. For instance, if there was a signature, a corresponding bubble had to be filled in on the same line, and the opposite was true. In the event that one was true without the other, FormReader would flag that occurrence, eliminating the possibility of human error.

"Because each book was processed as a batch," said Mr. Evdokimov, "an operator could look at all the flagged items for one book at once, rather than page by page, thereby reducing time spent on the verification process."

Processing Reduced from 14 Days to 16.5 Hours

With the new scanners, servers and ABBYY's FormReader software in place, it took Alameda County personnel 41 seconds to process a 150-page roster book through the recognition phase, which is the secondary stage between scanning and verification. The overall process (from book prep, scanning, recognition and verification) which once took two weeks to manually process, took a mere 16.5 hours!

"We found that the software was very accurate," said Mr. Chavez. "It did what it was supposed to do, and we noticed it was human error, not the software, that caused most of the false positives."

In addition to its speed and accuracy, the reliability of ABBYY FormReader meant a great deal to the Alameda County team as well. "You have to anticipate problems in my position," said Mr. Chavez. "There were a lot of new things being implemented that night, and we didn't know what was going to happen. We didn't have any real experience with ABBYY, and we didn't know exactly how robust the software was. But everything went well and it was a big relief off my shoulders. ABBYY's part went smoothly," he reported. "We couldn't have asked for anything more".

His supervisor agreed. "Being that it was an overhaul of an entirely manual process, it's hard to take any baseline other than to compare it to the time and man hours to process the roster books manually," said Mr. Paul. "It was a drastic improvement in both man hours and overall time to do it the automated way."

With the success of the 2008 election behind him, Mr. Chavez is now working on a different project for an upcoming election for Alameda County. "I expect the process to be just as smooth," he said.

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