



**31st Annual
National Conference
Houston, TX**

2015 Professional Practices Program

OCVOTES ELECTRONIC POLLBOOK

Orange County, FL

Submitted by:

Bill Cowles

Supervisor of Elections

119 W. Kaley St.

Orlando, FL 32806

(407) 254-6500

Bill@ocfelections.com

www.ocfelections.com

I. Introduction

Orange County Supervisor of Elections currently uses a voter registration system that was written and is maintained by in-house technical staff. The Orange County Supervisor of Elections office has implemented a new tablet based Electronic PollBook (OCVotes Electronic Pollbook) solution that was developed in-house. This solution was designed and developed with the idea of reducing wait times at the polling place, as well as creating a simple solution that was versatile. The new OCVotes tablet solution replaced the three previous laptop solutions that were utilized in Early Voting, as well as Election Day. These laptop solutions were bulky and required much more time maintaining, updating, and deploying. Our new solutions are self-sufficient, as they can be operated without the need of a facility's network connection and power.

II. How has the process been improved?

When designing the software for our tablet solution, one of our main objectives was to reduce wait times at the polls. In making the application interface more user-friendly and more intuitive, poll workers can now search and check in voters at a much faster rate. The average time it takes a voter to check-in has been reduced by over 70%. The check-in process was reduced from 140 seconds with the old solution to 40 seconds with the new one.

In addition, our new solution has the capability of retrieving live updated voter data from both local and statewide voter registration databases throughout the day. This feature allows poll workers to operate with up-to-date data, which helps to reduce the number of provisional ballots issues. These provisional ballots can have a huge impact on wait times.

III. What are some of the benefits for voters and candidates?

As mentioned earlier, wait times have greatly been reduced, meaning the voter spends less time waiting in line. The voter can present his or her Driver License and have it swiped or scanned using the 2D scanner and magnetic reader built right into the tablet's sled. In doing so, the poll worker can locate the voter and continue checking them in without worrying about typographical errors which can occur when entering credentials manually.

The OCVotes pollbooks are interconnected, sending data electronically to the "Help Desk" as needed. Because of this, voters experience less frustration and shorter wait times at the "Help Desk".

This solution communicates with our office in real time utilizing a mi-fi connection. Not only does this enable pollworkers to search up-to-date information at the county and state level, it enables the collection of data that is subsequently used to display voter turnout on our website throughout the Early Voting period and on Election Day. This live data coming directly from our tablets in each precinct or early voting site can be viewed by voters and candidates alike. Candidates can also allow their poll watchers to monitor voter activity on our website from the comfort of their campaign office or using any mobile device.

IV. How does this solution benefit the Supervisor of Elections Office?

There can be only one

Turning three laptop solutions into one tablet solution has greatly improved the way our office manages our Electronic PollBooks. Preparing each Electronic PollBook for Early Voting or Election Day using one of three different configurations was a long process utilizing a large amount of staff resources. One single solution is now deployed to every OCVotes Electronic Pollbook. This is accomplished in as little as half a day with less than half of the amount of workers it once took. The potential for configuration issues has been greatly reduced as well.

Voting History

Aggregation and reporting of voting history has been streamlined as well, now that live data is being transmitted to our office from each Electronic PollBook unit. We no longer have to wait to extract data from each individual tablet. In addition, signatures are now captured electronically, thus eliminating the need for scanning signatures from the registration books. These automated processes reduce the amount of man hours it once took to collect data needed to conduct voting history. Collection and reporting of voting history is now being performed more quickly and more accurately.

Going Green

With the collection of electronic signatures, our office was able to eliminate the need for the paper registration books and labels. This is a huge cost saver, as well as a step forward in reducing our Ecological footprint as we have reduced the amount of paper being used. Also, without bulky attachments such as separate scanners, magnetic readers, and printers, our new tablet solutions operate on less power. Our new tablet solutions have two batteries, with each battery rated at 10 hours (a total of 20 hours) runtime. In case of a blackout, we are able to operate without power from a Polling place.

Full Control

Creating our own tablet solution gives full control of our hardware and software. This allows us the flexibility we need to make changes as needed - something you may not get by purchasing 3rd party solutions. These changes can range from subtle changes on the user interface to major backend updates - all of which can be done in-house with a faster turnaround time.

Compatibility

Developing a tablet solution on Windows 8 operating system has given us the flexibility to integrate commercial off the shelf products. This kind of flexibility is a must when it comes to developing and implementing new changes now and in the future.

Storage and Weight

With limited space, our office is always looking for ways to utilize space in the most effective way possible. Our older solutions required a case for each individual unit which housed a laptop, scanner, magnetic swipe, and label printer. Our new tablet solutions allow us to fit two units within each case. The amount of space that our older system utilized in our warehouse was 413.88 square feet. Our new system only uses 292.5 square feet. That is a difference of 29.3 %. Each tablet solution is also lighter than its predecessor. At only 8.5 pounds each, our staff and poll workers are able to pick them up with ease. A big difference when compared to our older solution which weighed 22 pounds each.

New poll tool will track voter turnout in Orange County



A new tool will be in use for elections in Orange County this year. The kiosks have been designed to track voter turnout and participation.

By Amanda McKenzie, Reporter

Last Updated: Wednesday, August 06, 2014, 5:41 PM



ORANGE COUNTY -- News 13 is getting a first look at a new tool to collect voter turnout data, and it's data that everyone will have the ability to see.

The new counter will show just how many [Orange County](#) residents are hitting the polls throughout the election season.

County Supervisor of Elections Bill Cowles, unveiled a new electronic "Poll Book" on Wednesday.

It's a type of check-in system that will be present at all Orange County polling places. A valid photo ID can be swiped at the machine or manually entered by an employee to check in.

The machines are all connected by a network, so people will not be able to check in multiple times.

There's also another added benefit to the technology.

"The nice part is it also is going to be feeding information from the voting location to the elections office and we'll be able to post it on our website to show real time turnout," Cowles said.

The voter turnout numbers will go live on August 15, at the start of early voting, and will continue through Election Day and as absentee ballots come in.

These numbers will be updated live on the Orange County Office of Elections website.

To be clear this will not show election results. It will just show how many people turned out to the polls.

Experience and Cost Efficiency with Tablets

The Supervisor of Elections in Orange County, Florida, wanted to give voters an easier sign-in experience on election days—so the department replaced a fragmented laptop-based system with HP ElitePad 900 tablets running the Windows 8 operating system and an application developed in-house. This has cut average voter sign-in time by 70 percent, greatly simplified the job of poll workers, and increased the speed and accuracy of election reporting.

Business Needs

The office of the Supervisor of Elections, Orange County, Florida, is always looking for new ways to ensure the integrity of the electoral process, enhance public confidence, and encourage citizen participation. So when its staff realized the tools they were using to verify voter identity and distribute ballots at polling places were not delivering a great experience, they went in search of a better solution. In the previous workflow, poll workers used a form of identification to verify the voter's address with a custom-written application running on a laptop. The worker would print a label and paste it in a book, and the voter would sign the book to receive a ballot.

If voters encountered any issues during the registration process, they went to a help desk where a worker with special training and a separate application could resolve the issue. The voter would then return to the identification desk and start the process again—increasing wait times and reducing voter satisfaction. At the end of the 12-hour voting day, volunteer poll workers had to manually account for and record the distribution of more than 90 ballot variants. The ballot signature books were scanned and reconciled manually, which took a team of ten people up to two weeks for large-turnout elections.

“With Microsoft’s proven track record for long life cycles on their operating systems, we knew our software would have a long shelf life.”

Sue Elias, Sr. Deputy Supervisor of Elections – Information Systems



Company: Supervisor of Elections, Orange County, Florida

Website: www.ocfelections.com

Country: U.S.A.

Industry: Government—Elections

Employees: 45

Company Profile: The Supervisor of Elections in Orange County, Florida, works to ensure fair and free elections on behalf of the county's more than one million residents.

Software & Services:

- Windows 8
- Windows Server 2012 R2
- .NET Framework
- Visual Studio 2012
- Web Services
- SQLite
- Internet Information Services for Windows Server (IIS)

This technology was more than eight years old, with slow processing speeds and an outdated interface. Each laptop-based registration system weighed more than 22 pounds, putting an unnecessary burden on volunteer poll workers. It was also an issue to store the bulky devices in a warehouse where space was at a premium. "There were so many opportunities to improve the voter experience, we decided it was time to upgrade the entire process with the latest technology," says Luis Torres, Technical Service Manager at the office of the Supervisor of Elections.

Solution

The elections office decided to consolidate voter sign-in and help-desk functionality into a single tablet-based application. "Windows 8 was a must because we had the skills in-house to develop and support the application, and we also didn't want to rewrite the application every two years," says Elias.

Key criteria for the hardware included drop strength and ruggedness so it could withstand being unpacked, packed, and stored year after year; a reader capable of capturing the 2D bar codes used on Florida driver's licenses and ID cards; and compatibility with a range of printers and other peripherals.

"The selection process took a couple of years because the market for Windows tablets was expanding rapidly," says Elias. "Toward the end, Hewlett-Packard told us they had something new coming out. They showed us the ElitePad, and we were sold—it had everything we needed. The ability to obtain all the required hardware attributes with a good warranty meant the equipment would serve us for several election cycles. With Microsoft's proven track record for long life cycles on their operating systems, we knew our software would have a long shelf life."

The office invested in a fleet of 800 HP ElitePad 900 tablets, accompanied by HP ElitePad Retail Expansion Jackets. The jackets include an integrated image reader with 2D barcode scanning capabilities, a magnetic stripe reader, USB ports, and a second battery. A skilled team of developers led by Manny Cosme created the new software application using Visual Studio and the .NET Framework, along with Microsoft server-side technologies.

For the 2014 primary election, the tablets were deployed across 227 precincts, 12 remote early voting locations, and the elections office itself. Sixty-three thousand people used the application to sign in, with the count rising to more than 306,000 in the general election.

Benefits

The solution has reduced voter sign-in time by more than 70% and streamlined the customer service experience for those who need additional assistance. The office has also saved significant time and money by eliminating the need to reconcile voter check-in numbers and scan signatures manually.

- **Improved voter experience.** Upon entering a polling station, each voter is greeted by a poll worker standing behind a mounted tablet. When the voter presents identification, the poll worker scans it with the Retail Expansion Jacket's magnetic stripe reader or 2D barcode scanner to confirm the voter's registered address. The poll worker then asks additional questions provided by the app. Using a custom stand developed by the elections office, the voter flips the tablet around and uses a finger to sign. All the tablets are Internet-connected using a secure Wi-Fi hotspot, enabling the first line of poll workers to handle a wider variety of situations. If voters need more help, they can pick right up at the help desk without having to track down the poll worker who initially checked them in. The Voting Technology Project, a joint effort between Caltech and MIT, provided the Supervisor of Elections with online tools which were used to measure the impact the new application would have on voter wait times. The average time it takes a voter to sign in has been reduced by over 70%, from 140 seconds with the old solution to 40 seconds with the new one.
- **More efficient use of public funds and space.** By going paperless and collecting all data digitally in a single workflow, the office is using its budget more efficiently. "We no longer need to scan signatures manually, which translates to significant cost savings for the people of Orange County," says Elias. The office of the Supervisor of Elections has a warehouse, but space is always tight. The previous configuration with laptops in cases measured approximately 30" by 24" by 24", while the new solution is only 8" by 11" by 11" including the jacket and stand. The office can store 48 tablets per cabinet, which allows for simultaneous charging of all devices. Not only does this save space, but it also ensures maximum longevity for the device batteries. The office is also moving to a self-maintenance model supported by the serviceability of the ElitePad tablets and supporting even greater savings.
- **Increased comfort and satisfaction for poll workers.** "The poll workers love our new voting process," says Torres. "They used to have to do manual accounting every night. Now it's all electronic, so they can get home much faster." The previous solution was 22 pounds and was more complex to set up with its power strip, tabletop scanner, bar code reader, and large metal case. The new solution weighs only 8 pounds and has key functionality built into the compact case. It fits in a small wheeled suitcase, making transport, setup, and breakdown much easier.



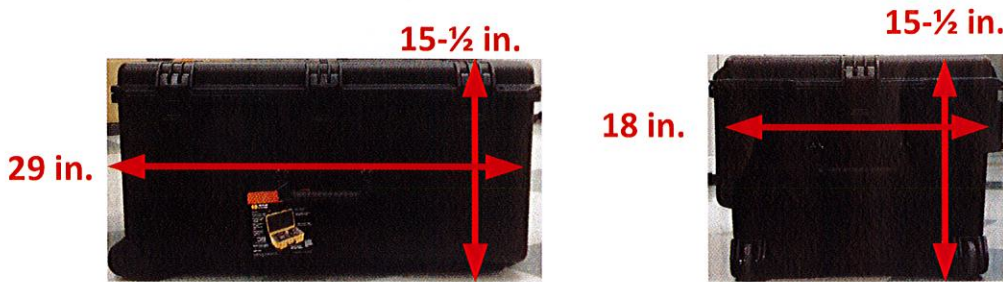
Attachment C: Laptop vs. OCVotes Electronic Pollbook Solution

Laptop Solutions	OCVotes Tablet Solution
TRAVELING CASE	
 	
CASE INTERIOR	
 	
FULL SETUP	
	

PELLICAN CASE

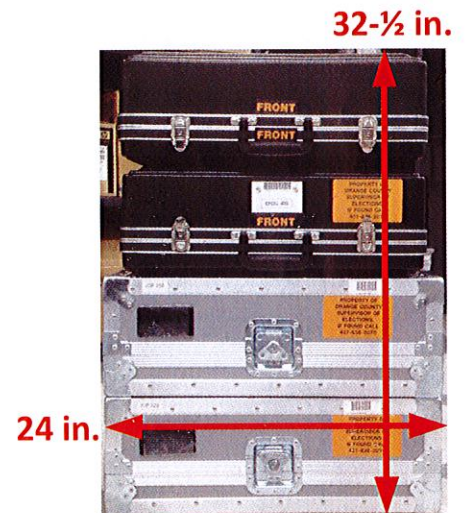
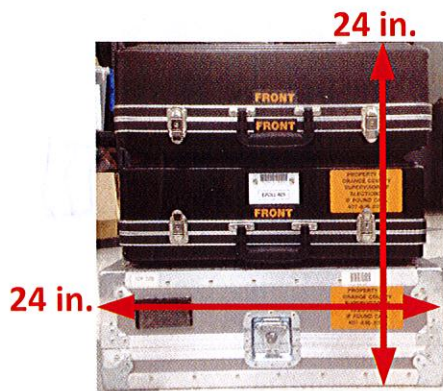
Weight with
no equipment
and foam:
29.5 lbs.

Weight with
three tablets &
stands:
55 lbs.



1 IOP & 2 ePOLL CASES

2 IOP & 2 ePOLL CASES



Total weight
with
equipment:
71 lbs. 15 oz.

Total weight
with
equipment:
102 lbs. 1.5 oz.

