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The Intelligent Mail Barcode – Tracking Mail Ballots

Leon County, Florida

Submitted
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The Intelligent Mail Barcode – Tracking Mail Ballots

For the 2008 Presidential Preference Primary Election the Supervisor of Elections Office of Leon County (LCSOE), Florida successfully implemented the Intelligent Mail Barcode (IMB) for tracking of mail ballots throughout the United States Postal Service (USPS) mailstream. This paper will discuss the barcode, our procedure for implementation and our results.

Overview

The IMB is a relatively new concept introduced by the USPS in 2006 as a replacement for the POSTNET and PLANET barcodes. POSTNET barcodes are printed on mail pieces to route them to their destination. PLANET codes are printed on mail pieces to permit tracking. The IMB incorporates both of these elements into one barcode. The USPS claims that the IMB, "...offers a more effective alternative to existing barcodes by increasing the amount of information that is present on letter and flat mailpieces, allowing for expanded tracking capability, and creating greater visibility into the mailstream." The IMB provides the user with the ability to encode special services and routing. The IMB also provides for the complete serialization of each individual mailpiece for enhanced tracking. This last component proved to be the most compelling aspect of the technology to our office.

Assessment

The LCSOE office attended the 2007 National Postal Forum (NPF). The NPF provides an occasion for mailers to dialog with national postal representatives. At the NPF we trained extensively on the new rate case (the USPS implemented shape-based pricing to take effect mid 2007) and the implementation of the IMB. During our conversations with national Postal representatives we learned that the IMB would become the standard for letter automation and the vehicle for which mail-tracking will take place in the future. We also met TrackMyMail.com, a professional mail-tracking company that has extensive knowledge of mail tracking. They had recently begun soliciting elections officials to pilot their TrackMyVote application.

Development

Upon returning to Tallahassee we were charged with the idea that the accountability of our mail ballots would increase and that the transparency of the USPS could be elevated. Our desire was to have each mail ballot have a unique identifier that would permit it to be tracked from inception to destination. We began talks with our current voting records management software company, VR Systems (VR), to request that their software incorporate the ability to encode and print the IMB on each outgoing mail ballot envelope. Many conference calls were held between the two vendors and our office to insure that their systems were compatible. The tracking of ballots requires that a digital file be generated that lists each uniquely coded mailpiece, destination, and individual name. We chose to also incorporate the unique voter identification, the date of birth, and precinct assignment to permit quick searches for voter's records.

Design

The old design of our envelope was a flat-sized piece. Based on the new shape-based rates (passed in early 2007) two-ounce, first-class, flat-sized mail pieces were to increase in cost by \$0.29 from \$0.85 to \$1.14. A two ounce, first-class, letter-sized piece was to be \$0.58. We also learned that IMB tracking had much higher scan rates with letter-sized pieces. Conversations with both the USPS and

TrackMyMail.com led our office to completely redesign the mail ballot envelope to not only fall into a lower rate category, but also to take full advantage of the IMB. Figure 1 shows the actual ballot envelope design with voter information and encoded IMB (In addition to making the mail ballot envelope smaller we standardized the color to green to make it more noticeable to postal employees and the voter.)

Testing

The testing phase was the most time-intensive stage of the process. The IMB has particular tolerances that must be met during printing in order for the USPS scanners to read and interpret it correctly. The IMB cannot be read by any conventional barcode scanner. Scanners that can read these barcodes cost \$1,500 and above. Each printed trial-piece had to be taken to the USPS and read on their scanners. Our local postal employees were very amenable to our endeavor and permitted us to test a number of jobs. Their machines returned to us reports that measured the compliance with postal standards as well as reading our IMBs.

Deployment

The deployment phase came in early December of 2007 when we began to process the first mail ballot requests that were queued in the VR software. Each voter request was serialized, encoded and printed directly onto the return envelope by the software. The tracking file was generated by the software concurrently with the printing. The file was then uploaded to an FTP site where TrackMyMail.com could refer the records to the USPS main servers to search for scans that matched our pieces.

Analysis

The tracking of our ballots was very successful. Of the 11,227 mail ballots entered into the USPS mailstream we were able to track 10,841 of them, or 96.6%. TrackMyMail.com provides many different analyses of the returned information that is easy to view in aggregated report form or individual piece look-up. Figure 2 show how an individual scan looks. 919/ DBCS Delivery Point Sequence, 2nd Pass means that the mail-piece has been sorted to the carrier and should be out that day to be delivered. Figure 2 shows that the piece was entered on December 11, 2007 and was set to be mailed on December 12, 2007. I received the ballot on the 12th just as the report indicated. I went to my mailbox knowing that my mail ballot should be there when I returned home. In fact, most pieces reached their destinations very quickly. Figure 3 shows a short list of the destination cities of some of our ballots and the time it took them (on average) to reach that destination. Pieces going to the Tallahassee area took an average of 1.05 days.

The tracking of the mail ballots added roughly \$0.09 to each mail ballot we attempted to track. With the complete redesign of the mail ballot envelope the cost of each mail ballot with tracking came to \$0.67.

Conclusion

Elections officials have the challenge of relinquishing our ability to completely control and account for our mail ballots once they enter the mailstream. With the Intelligent Mail Barcode we are one step closer to having full accountability of all of our sensitive elections mailings. Our main vehicle of correspondence with the voter is through the postal system. By utilizing this innovative solution to reveal each step of the mailing process we now have greater assurance that the mail generated by our office is reaching the voter.

Figure 1. Mail Ballot Envelope Design

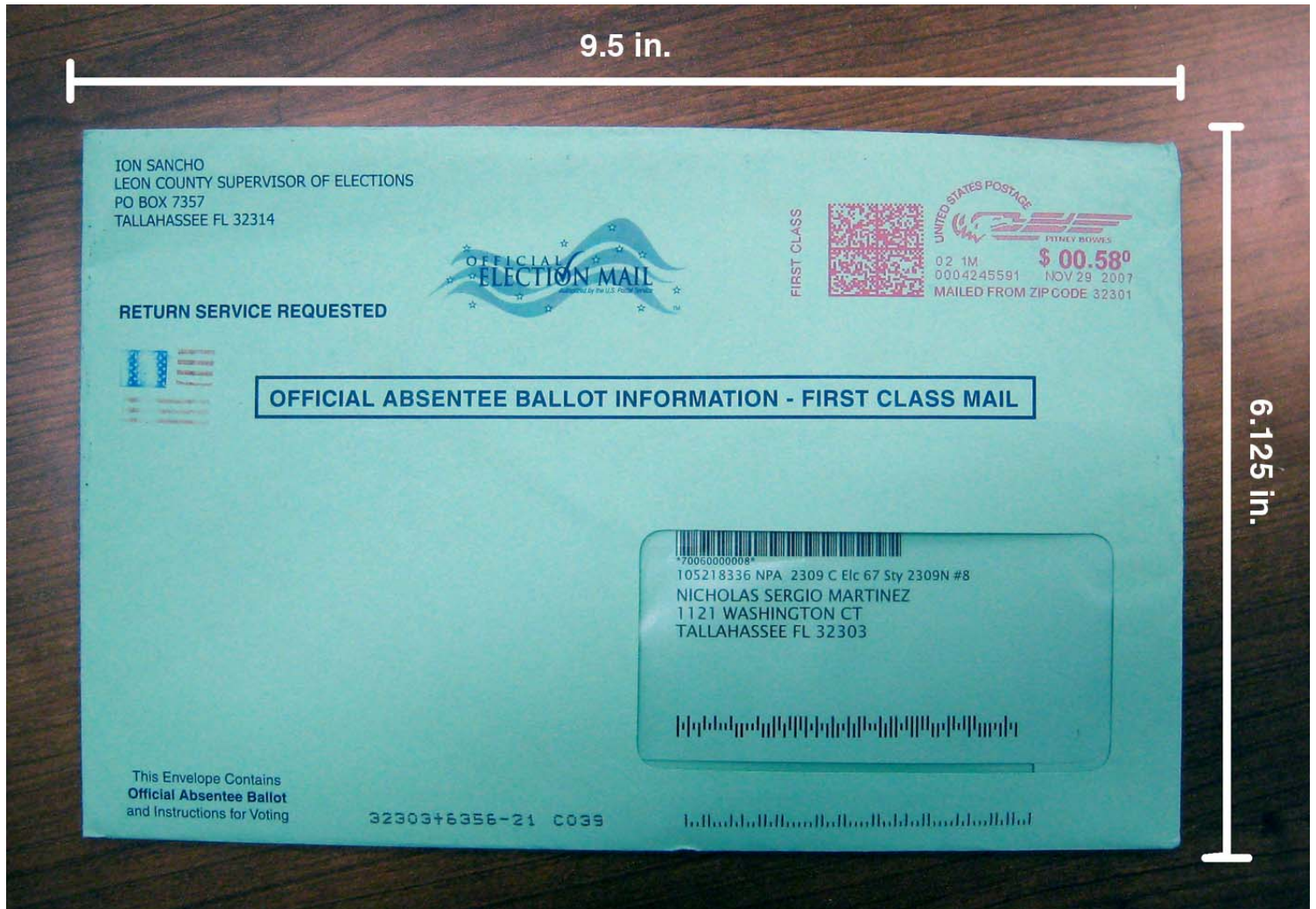


Figure 2. Image of Scan Report

trackmymail.com PrecisionTrack™

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Scan History **Supervisor of Elections, Leon County**

Job Id - Job Title	20071211DomesticCivilian4 - FirstRun_DomesticCivilian4	Mailed (Pieces)	1,500
Date Mailed	12/11/2007	Tracked (Pieces)	1,500
Targeted In-Home Date	None selected	Scanned (Pieces)	1,498
Class & Size Of Mail		Forwarded / Returned (Pieces)	3
Mail Drop Facility	32301	Percent of Pieces with Scan Activity	99.87%

Intelligent Mail Barcode	Date & Time	SCF/Description	OpCode/Description
00 040 000274 000007292 32303635621	12/12/2007 3:00:00 AM	323 / TALLAHASSEE FL	918 / DBCS - DELIVERY POINT SEQUENCE, 1ST PASS
00 040 000274 000007292 32303635621	12/12/2007 4:17:00 AM	323 / TALLAHASSEE FL	919 / DBCS - DELIVERY POINT SEQUENCE, 2ND PASS

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 Unauthorized access is prohibited. Usage will be monitored.
[Use Agreement](#) [FAQ](#)

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Courtesy of TrackMyMail.com

Figure 3. City Delivery Report

Mailing City, State	Averaged Elapsed Time (days)	Number of Pieces Mailed
TALLAHASSEE, FL	1.05	9320
APO, NJ	1.60	95
GAINESVILLE, FL	2.40	51
WASHINGTON, DC	3.21	35
ORLANDO, FL	2.38	34
WOODVILLE, FL	2.17	30
TAMPA, FL	2.23	26
ATLANTA, GA	2.73	26
FPO, NJ	41.00	22
NEW YORK, NY	4.22	18
MIAMI, FL	2.36	14
DURHAM, NC	2.57	14
ARLINGTON, VA	3.71	14
FORT LAUDERDALE, FL	2.33	12
JACKSONVILLE, NC	2.30	11
BROOKLYN, NY	4.10	10
CHAPEL HILL, NC	2.40	10
ALEXANDRIA, VA	4.30	10
WEST POINT, NY	3.70	10
SAINT PETERSBURG, FL	2.33	9
CHICAGO, IL	3.38	8
NASHVILLE, TN	3.13	8
COLUMBIA, SC	2.57	7
PENSACOLA, FL	2.86	7
QUINCY, FL	1.00	6
WINTER PARK, FL	2.00	6
NEW ORLEANS, LA	2.33	6
DECATUR, GA	2.33	6
HONOLULU, HI	3.33	6
SARASOTA, FL	2.67	6
NORFOLK, VA	3.50	6
HOLLYWOOD, FL	2.33	6
BRADENTON, FL	2.00	6
SPRINGFIELD, VA	3.83	6
PROVO, UT	2.60	5
CLEVELAND, TN	5.00	5
PHILADELPHIA, PA	3.40	5
BIRMINGHAM, MI	2.60	5
JOHNSON CITY, TN	2.33	5
WOODBIDGE, VA	3.80	5
VIRGINIA BEACH, VA	3.50	5
CHARLESTON, SC	3.00	4
GOLDSBORO, NC	2.00	4
FORT BELVOIR, VA	3.75	4
PANAMA CITY, FL	1.25	4