

# The Precinct Atlas<sup>®</sup> Cerro Gordo County

## Iowa State Association of Counties 2010 Excellence in Action Awards

### Application prepared by

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### 1. Abstract of the program

The Precinct Atlas is a precinct election management software and system developed by Cerro Gordo County specifically for Iowa elections. It is not involved in the counting of votes, but instead is used for correctly processing voters, based on each voter's specific circumstance.

The purpose of the program is to assist Iowa's precinct officials in navigating the dense network of election laws by organizing and prioritizing them in a software program, while on the computer screen presenting step-by-step instructions or simple questions in everyday language.

Data for the program is initially exported from I-VOTERS, the statewide voter registration and election management system. Data files of registered voters, address/precinct designations, absentee voters, and convicted felons are then imported into the Precinct Atlas software.

The program is never directly connected to the I-VOTERS program, and each precinct is set up as a stand-alone system. Decentralizing and disconnecting the process has the benefit of providing integrity and security to the election process.

### 2. The problem/need for the program

In the 2008 presidential election, Iowa implemented Election Day voter registration (EDR). Although the precinct officials had registered new voters at the primary election the same year, primary turnouts are typically small, with voters who tend to be those that vote in all elections. The November 2008 election set record turnouts across the state, and was the first true test of this Election Day voter registration in Iowa.

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With EDR, the duties of the precinct officials were greatly increased in substance and difficulty. For the first time, they had to make front-line decisions on a voter's eligibility to register and vote; decisions which, if made incorrectly, could not be undone in many cases. Added to that was complexity caused by integrating EDR requirements with existing laws, including:

- The official list of valid IDs for an EDR voter is similar to, but not the same as, the list of valid IDs for pre-registered voters.
- The voter's address on a driver's license must be considered in proving identity and residence for an EDR voter, but is irrelevant for a pre-registered voter.
- A pre-registered voter whose status is "Inactive", and who needs another voter to attest for the voter, is required to go through EDR requirements, as opposed to regular ID requirements.
- For some voters a utility bill could be used to prove identity, while for others it could only be used to prove residency, and not identity.

Across the state, one of the results of the new EDR duties was that the precinct officials, despite their best efforts, filled out forms incorrectly or incompletely, filled out the wrong forms, or failed to obtain the required signatures. Another result was that, in an effort to avoid errors, they unnecessarily required many voters to cast provisional ballots or go through the extensive EDR procedures, when a simple change-of-address or proof of identity may have been all that was required for a particular voter.

These new issues compounded the ever-present election problems of illegible forms; balancing the number of voters in the precinct register with the number of ballots in the ballot scanner; precinct officials sending a voter to the wrong precinct, giving a voter the wrong ballot, or marking the wrong voter's name in the precinct register; and staff time to process voter activity after the election.

### **3. Description of the program**

Immediately following the 2008 election Cerro Gordo County Auditor Ken Kline talked with County MIS Director Scott Tepner about purchasing or developing an electronic pollbook program. A few weeks later the two met with vendors at the fall meetings of the Iowa State Association of Counties. After seeing demonstrations for three electronic pollbook programs, Kline and Tepner decided to pursue development of an in-house software program. The deficiency of the vendors' programs was that they did not have the Iowa-specific functionality that a customized, in-house program could provide.

Within a period of two weeks Kline and Tepner made the following progress:

- Kline developed and presented an outline of the basic software functionalities and a series of screen layouts to Tepner and the two MIS programmers, Rodney Ross and Mary Imlay.
- Ross and Imlay talked with staff at the Iowa Secretary of State's office about existing data extracts from I-VOTERS, the statewide voter registration software system.

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- Tepner suggested a hardware design that included networking two laptop computers at each precinct, with one serving as the “master” computer and the other as the “secondary”.
- Tepner suggested attaching a printer to each laptop with a USB cable, and Kline proposed an off-the-shelf, two-spindle label printer loaded with shipping labels.
- Kline developed the concept of using shipping labels printed with voter-specific or situation-specific information to complete the various required election forms.

Kline and Tepner decided the County had everything necessary to build a working system and to go forward with developing the software. Kline said he believed other counties would be interested in an election management program that was customized for Iowa law. In order to avoid licensing fees for other counties, Tepner suggested building the program in SQL Express, a free version of the more robust SQL Server that the County used for other in-house programs.

Tepner said that any software written by the County would belong to the public, and that the County could not make a profit on the program. Kline and Tepner talked with various attorneys and arrived at the conclusions that the County could copyright the software and charge fees to recoup the costs of development. They recommended to the County board of supervisors to pursue a copyright in order to maintain editorial control over the program content, and the board approved the recommendation.

Wanting to find a way to share the program with other counties while avoiding contractual and support issues, Kline asked for a meeting with Iowa Secretary of State Michael Mauro. In December 2008, Kline, Tepner, and Ross demonstrated a proof-of-concept, and from that initial meeting has grown a partnership in which the Secretary of State has:

- Reviewed and approved design logic and business rules
- Revised election forms to accommodate labels
- Purchased license to distribute in Iowa for \$24,000
- Improved data exports from state voter registration software
- Created imports of voter activity for post-election processing
- Distributed the Precinct Atlas free-of-cost to all Iowa counties
- Coordinated group purchases of equipment
- Sponsored multiple software installation and training events
- Developed setup and Election Day staffing support

Labels are printed with voter-specific or situation-specific information, and are used to complete the several election forms used by precinct officials on Election Day. The completed forms are virtually error-free, and legible, and the forms are color coded for ease in finding and filing. The revised election forms can be used with or without labels.

Ross and Imlay have revised the program multiple times. Tepner developed an installation shell to install SQL Express, the Precinct Atlas, printer drivers, and a deployment kit on counties' computers. The Secretary of State has developed a strong lead support system for installation and use of the program, while Tepner and Kline have assisted in the training and support for dozens of counties. The County and State have also partnered in the development of a similar program for absentee voting, which will be used in the November 2010 gubernatorial election.

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Cerro Gordo County used the Precinct Atlas for the first time in a special election in February 2009, less than eight weeks after making a “go project” decision. In a mock election later that month, precinct officials at two laptop computers processed 511 voters in a three-hour period, including a disproportionately high number of new voter registrations, provisional ballots, changes of address, and other special voter situations. An audit following the mock election revealed not one error or omission in the process and paperwork. Within twelve months after its general release, forty-six counties used the program in a total of 688 election precincts.

### **4. Use of technology**

The Cerro Gordo County MIS Department developed the Precinct Atlas database software, using SQL Express in an effort to minimize licensing costs to counties. MIS staff also developed software and hardware logistics for networking two or more laptop computers through the use of a crossover cable, hub, or wireless access point, and for automatic transmissions of voter activity from precincts to a central source, for those precincts that have Internet or cell phone access.

The MIS Department, in cooperation with the Iowa Secretary of State, also developed:

- An installation shell for installing SQL Express, the Precinct Atlas database and executable files, barcode fonts, and label printer drivers on laptop computers
- Data export procedures for extracting data from I-VOTERS, the statewide software for voter registration and election management
- Data import procedures for importing the I-VOTERS data into the Precinct Atlas
- Data uploads of voter activity following an election, reducing post-election processing time by more than half

### **5. Cost of the program**

Cerro Gordo County sold a license-to-distribute the Precinct Atlas to the Iowa Secretary of State for \$30,000, which covered the software programmers’ time for the initial program development, as well as the estimated development of a similar software program for use in absentee voting. An estimate of the County’s to-date investment is approximately double that figure.

The County and Secretary are currently negotiating for the creation of a permanent position funded by the State and managed by the County, for ongoing program maintenance and enhancements, and for hardware installation and support.

The cost to counties for the program is zero. Counties’ out-of-pocket costs include laptop computers, label printers, and ancillary equipment, and an estimate of that cost for most Iowa precincts is \$1,300. Soft costs include training for precinct election officials.

## **6. Results/success of the program**

Since it was first used in a special election in Cerro Gordo County in February 2009, the Precinct Atlas has been used in forty-six Iowa counties. Results include:

- Correct and efficient processing of voters
- Consistent application of election laws
- Virtually error-free election forms
- Increased confidence of precinct officials in administering election precinct duties

Outside of the amazing growth rate of counties using the program, perhaps the best evidence of its success are the comments from county auditors and precinct election officials, some of which have been included in the appendix of this application.

## **7. Worthiness of an award**

If good government can be defined as effective and efficient service to the public, then the Precinct Atlas is government at its best.

Cerro Gordo County defined a series of problems and needs, and then took the initiative to develop a creative, effective, and low-cost solution. In the process, the County took a cooperative approach by recognizing and incorporating the needs of other counties.

The County copyrighted the software, which effectively kept the program within the public domain, while maintaining control over the source code. While private individuals and companies did not profit as a result of this action, the public benefited.

The County Auditor and MIS Director partnered with the Iowa Secretary of State for the quality and success of the program. Each entity devoted its expertise and resources, but more importantly, each entity committed to the development and implementation of a new program that held great promise and potential. Focusing on the quality of the program and service, and not on individual credit or political gain, has resulted in forty-six counties voluntarily adopting the program within the first year of its general release.

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**Appendix – Comments from county auditors and precinct officials**

“Success! Success! Success! We couldn’t be more pleased with the results of our first election using Precinct Atlas.” Linda Humphrey, Davis County Auditor

“We first implemented the Precinct Atlas in six of 57 precincts in a special election in May 2009. We were so pleased with the results that we used it in all precincts in seven subsequent elections. The program makes the precinct officials’ job easier, and balancing and crediting each voter has saved time, effort and expense. Problems reading handwriting and filling out forms have virtually been eliminated. Voters are processed more efficiently and are better assured of their voting experience.” Tom Slockett, Johnson County Auditor

“I said you don’t dare take that computer away from us. We want it. We like it so well. It tells us exactly what to do if you need a change of address, change of precinct, change of anything. It just walks you right through it step-by-step.” Judy, Lee County Precinct Official

“The results were overwhelmingly positive for both the voters and poll workers. The Precinct Atlas program has made an immeasurable improvement in the level of confidence of poll workers in handling special circumstances. Not only has it eased their stress level, voters seem to love it as well.” Holly Fokkena, Butler County Auditor

“We had nothing but praise from our Precinct Election Officials. They were thrilled with not having to sort through all the detailed instructions and the endless forms. Precinct Atlas walked them through every detail. Our motto has become, ‘Just read the screen!’” Marsha Carter, Shelby County Auditor

“I used it in five precincts and everyone loved it. At the precinct with only the one person who had computer skills later in the day when the helper had left, they called for assistance and as we were walking them through it on the phone, we could hear the voter telling them what to do. I guess you can advertise the program as ‘so easy a voter can do it’.” Kay Clark, Worth County Auditor

“The response from the precinct election officials was phenomenal! Precinct chairs reported that the on-screen instructions were easy to follow, and as the election day progressed, workers became very efficient as they verified voter information and provided voters with ballots. No provisional ballots were unnecessarily issued, because clear instructions are provided for special situations. Also, balancing at the end of the evening was much easier with the tally report and ballot count features. Efficiency and accuracy were the words of the day!” Joni Ernst, Montgomery County Auditor

“It’s awesome . . . woaaa! Our poll workers are so excited that they are recruiting more friends to work at future elections.” Kris Glienke, Cherokee County Auditor

“All the paperwork came back to the office in perfect shape and organized. WOW, this is new. We have uploaded the atlas into I-VOTERS and were impressed with how smooth this went.” Betty Ellis, Wright County Auditor

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“I must admit I was a bit hesitant when Dennis announced the use of computers for our elections. However, after good training and one election down, I have to say “Thank You” for this efficient program.” Mary Ann, Jasper County Precinct Official

“Over the last year I have been able to help teach the Precinct Atlas to the election officials. The most positive comment is how the program walks you through every circumstance you may have in processing a voter and does not require relying on your memory or taking the time to look up procedures in a manual.” LaVonna, Johnson County Precinct Official

“The experience was completely positive. The pollworkers loved it. One even threatened us if we took it away from them. There were voter comments on how the process was faster.” Denise Fraise, Lee County Deputy Auditor

“The system is so friendly for the user. Possibly the best experience I can share is one with my wife, a novice computer user who learned and loves the system. That to me was the ultimate test of acceptability.” Gary, Johnson County Precinct Official

“The Precinct Atlas prevents procedural and legal errors made by precinct officials that could disenfranchise voters. I have a renewed confidence that Iowa voters will have their voting rights protected better than they ever have.” Dennis Parrott, Jasper County Auditor

“We recently used the program for a large turnout school bond election that crossed county lines, and the program worked flawlessly. I have received many compliments from voters who noted how organized the precinct officials were, and how much more streamlined the voting process was.” Janine Sulzner, Jones County Auditor; President, Iowa State Association of County Auditors