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South Dakota Central Election Reporting System

South Dakota Secretary of State

Submitted by:

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Central Election Reporting System South Dakota Secretary of State

A reporting system that can seamlessly link every possible facet of the election process into a single system is a dream of every election official. In November 2008 this dream became a reality in South Dakota as the Central Election Reporting System (CERS) assisted in coordinating, streamlining and managing every phase of the 2008 election process.

After the 2006 General Election, outdated technology made it necessary to completely revise the manner in which election information was managed and reported in South Dakota. The Secretary of State and County Auditors were using a multitude of different systems to track candidate petition filing, ballot certification and creation, election night results reporting, and county and state canvassing. These systems were labor intensive, requiring data input numerous times, along with the quality control steps to ensure the accuracy of information. After reviewing possible existing systems in other states, the decision was made in May 2007 to create a custom program – one single system that could be used by the Secretary of State's Office (SOS) and County Auditors to provide all of the election functions in a unified manner for statewide primary, secondary, special and general elections.

This was an ambitious project in that the first milestone – the June 2008 Primary Election – was one year away and the General Election followed just five months later. To meet the challenging deadlines, Secretary of State Chris Nelson assembled a highly talented and dedicated team of professionals, to include the Election and Information Technology staff of the SOS, developers from South Dakota Bureau of Information and Telecommunications (BIT) and BPro Inc., and County Auditors. The project team's diligent planning, reviewing and testing were critical to the CERS development. The ultimate key to success proved to be the decades of election experience of the project team and all 64 County Auditors.

Karen Layher, Grant County Auditor, was excited to be part of the development team. She stated, "As a member of the election officials, I found being part of the development of the CERS amazing! To have the opportunity to test each component allowed a practical approach for the election official to see first hand how each individual step led into the next phase. Secretary Nelson was receptive to any change to enhance the CERS system and because of his vision and the hard work of all involved, the State of South Dakota has an central election reporting system the voters can be proud of."

The goals of the system were to eliminate duplicate entry of data, provide for rock-solid management of the data, allow for seamless transition between candidate data and ballot preparation, allow for seamless importation of election results from the County Auditors and to provide a system for electronic canvassing of results at both the county canvassers and State Board of Canvassers levels. An additional benefit of having the data in a uniform platform was the ability to allow the public to access data, such as their polling place location and sample ballot via the web on the Voter Information Portal. Election night results would be generated and disseminated with more detail, distribution methods and graphical presentations, which would include exports to the Associated Press. Tremendous steps were taken to address system performance and to maintain absolute system security.

The foundation of CERS was the "ID Combo Number." Secretary Nelson, drawing from nearly 20 years of election management experience, envisioned designing a complete election system by identifying and assigning every detail of the election process with a unique number. The ID Combo Number included legislative districts, counties, cities/townships, precincts, wards, commissioner districts, school districts, special districts and political party codes. This combined number was then linked to candidate races, ballots styles, individual voters, and for use in election night reporting, the canvassing reports, the accumulation of statistics, and for permanent documentation. (Exhibit 1)

One of the primary components of CERS was candidate management. As each candidate was certified, information was entered into CERS. The Candidate Table contained all identifying information, including a unique Candidate ID Number. This information was linked with the Candidate Race Table, which identified the specifics of the race and length of the term. From the candidate information, letters were automatically generated to each candidate regarding the election, which included instructions for accessing the Candidate Voice Capture (CVC) component of CERS. CVC allowed the candidate to call in and provide a voice pronunciation file that was then used in programming the AutoMARK voter assist terminal. Along with candidate information, CERS included ballot question information, with the ballot number/letter, title, explanation by the Attorney General, State's Attorney or City Attorney, and recitation.

The County Auditors benefited greatly from CERS' integral function of developing the ballot styles necessary for the election. Once the political party ballot order was determined and entered into CERS, along with all the information regarding the candidates, ballot questions, specific elections, criteria for the different races and their relationships to various government levels, with a single step the Combo ID Numbers were generated. This step seamlessly created every ballot style to be used throughout the state. The system included multiple safeguards for quality assurance by allowing the County Auditors to error check throughout the process. After the necessary ballot styles were determined, CERS allowed the County Auditors to review a sample ballot before releasing it to the printing vendor. CERS also indicated the number of ballots necessary for each precinct, including the breakdown for each party, which was essential for the closed primaries in South Dakota. Once each county verified the accuracy of their ballot styles, the file was exported to the outside vendor for printing. After review of the proofs and approval of the ballots for printing by each County Auditor, the sample ballots were released to the Voter Information Portal (VIP). Regarding

the efficiency of the ballot creation process, Kay Schmidt, Lake County Auditor, conveyed, "After my proof was okayed, the official ballots arrived six days later. I was very pleased with the timeframe, because it allowed my absentee voting to begin earlier than the law prescribed." (Exhibit 1)

CERS created a significant informational gathering tool for voters with the VIP, which links directly with the Statewide Voter Registration Databases. Any registered voter can access the VIP from the SOS website to determine registration, the physical address of registration, party affiliation, precinct identification, and polling place name and address, as well as messages from the Secretary of State. By accessing the VIP, an individual could view or print his/her sample ballot for a statewide election. From November 2-3, 2008, VIP had over 30,000 hits for voter information, with over 56,000 since August 2008. For the County Auditors, VIP has eliminated numerous telephone calls and requests for sample ballots, thereby becoming a significant cost saving tool.

The success of the Election Night Reporting component of CERS was a major accomplishment that involved the concerted efforts of all the County Auditors, the project development team and a Special Response Team from BIT. CERS allowed each of the 64 County Auditors to either manually input election results or automatically upload data from the Election Reporting Manager software. The results of extensive testing were evident when the Election Night Reporting component uploaded the first data as the last polls closed in the western part of the state. All the results were updated automatically every five minutes, with results being displayed on the SOS website. An individual could choose to view the results of each race (federal, state, county, special district, or municipal and school when combined with a statewide election) from a federal or statewide level or drill down all the way to the precinct level. (Exhibit 3) In addition, the results were provided in statewide maps, with the maps displaying the results for each county and tags reflecting the actual returns and number of precincts reporting. CERS provided continual reporting for the number of counties and/or precincts completed or pending. CERS also flagged possible recounts for any of the reported races. (Exhibit 4) Special exporting capabilities provided the results in real time to the Associated Press and other media outlets. The success of CERS was realized with all the results being completed in less than six hours. At the conclusion of the election Secretary Nelson commented, "the election night tabulation and reporting was the smoothest he had ever seen...beyond his best expectations." Paul Myrick, KELO News in Sioux Falls, echoed the same opinion saying it was the "smoothest election I can remember and Reagan/Carter was my first."

After the completion of the Election Night Reporting, CERS was then utilized in the canvassing process at both the county and State levels. After provisional ballots were processed, CERS automatically provided a canvassing report, not only for the county level, but also for the State Board of Canvassers. Where the canvass process was previously manually prepared for review, the addition of CERS streamlined the process and eliminated countless hours from all offices. (Exhibit 5)

In addition CERS provided numerous administrative features. The system was able to transition from one election type to another, as with the primary to the general election. The system automatically transferred the primary winners, preparing the data for the general election. CERS was developed with significant statistical capabilities. The Election Assistance Commission continues to expand the need for the collection of election related data. CERS was able to automatically capture this required data down to the precinct level. The data collection capabilities include the total number of registered voters, the number of active or inactive registered voters, number of persons voting, number of provisional ballots cast on election day and provisional votes counted, and the total number voting for the Federal offices.

Reflecting on the impact of the system, Sue Roust, Minnehaha County Auditor, wrote, "CERS greatly streamlined the election process for South Dakota local governments and improved the flow of election information to our citizens. SOS staff entered all statewide election contests, which provided consistency and accuracy in the ballot production process. Auditors generated and reviewed ballot layouts almost immediately following the drawing for ballot order! And one of the best features was that voters can go online to look up their polling place and see the exact sample ballot for their precinct. Not only did this reduce the number of calls my office fielded, but it allowed us to discover and correct registration mistakes before Election Day. The election night reporting feature allowed us to upload results easily to the state system, replacing the manual entry that used to require significant staff time on election night, and voters and candidates could see results down to precinct level. CERS has tremendous benefits for county auditors, candidates, and our voters!"

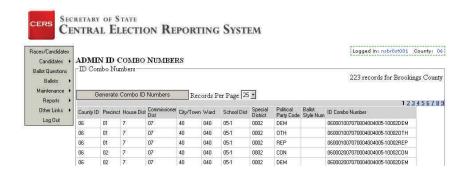
A final noteworthy aspect of the development of CERS was the cost. Where other states have spent millions of dollars developing systems that either are not yet functional or include only a fraction of what CERS has to offer, to date the State of South Dakota has invested approximately \$300,000 into a system that works. This was made possible through fiscal discipline, an incredible development team, the assistance of every County Auditor from across the state and most especially the visionary guidance and leadership of Secretary of State Chris Nelson.

The power of this program is currently being demonstrated as several other agencies across the nation are evaluating CERS as a possible alternative for their election reporting because of its adaptability to all levels – state, county and municipality – as a means for coordinating, streamlining and managing every facet of the election process.

ID Combo Number

Ballot Creation Flow Chart

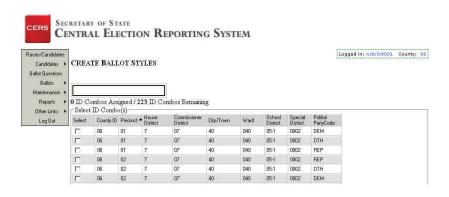
Generate ID Combo Number ▶ Determine Races/
Ballot Order ▶ Create Ballot Styles ▶ View Ballot Styles ▶ Export for Printing ▶ Release to VIP

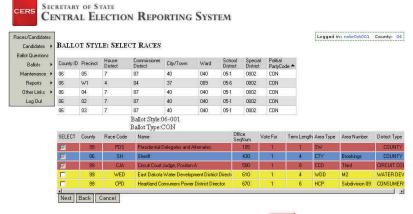


The system will automatically determine which county and local races are in each county and which candidates are in those races for this election.

When the Auditors click the "Generate Combo ID Numbers" button, this procedure queries the state voter file and creates all the possible ID Combo Numbers based on the records in the current state voter file.

CERS allows the Auditor to create the ballot styles which will be used in their county for the election. The Auditor may end up with one ballot style for the whole county or dozens of ballot styles, depending on the complexity of their election. The ballot styles created in CERS will mirror the actual ballots created by the printing vendor. These ballot styles are viewable by the voters through the Voter Information Portal.





This screen shows the ID Combo Numbers the Auditor has selected, the ballot style number and type of ballot in the process of being created, followed by a colored grid. The tri-color grid represents the determined races that relate to these selected combo numbers and the ballot style the Auditor is creating.

The list of ballot styles can be expanded by clicking on the plus sign in front of each style. This will show each Combo ID associated with that style. The example to the right adds to the list ballot style 06002—a Republican ballot associated with four ID combos and 184 total voters.

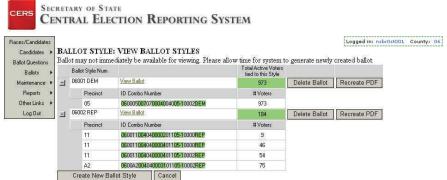


Exhibit 1—Central Election Reporting System, South Dakota Secretary of State

Voter Information Portal (VIP)



Welcome to the South Dakota Secretary of State Voter Information Portal. V.I.P. is provided as a public service by the Secretary of State in cooperation with the County Auditors in each of South Dakota's 66 counties.

Voter Registration Information for TERESA BRAY 20073 AUTUMN PL , PIERRE Political Party: REP

Polling Place Name: #11-Rural New Life Assembly of God Church Polling Place Address: 1120 N. Harrison, Pierre, SD 57501 Precinct: #11-Rural New Life Assembly Chu

Absentee voting begins September 23rd for the November 4th General Election. Your sample V.I.P. ballot will be available here on or before September 23rd.

Chad Heckenlaible

Sandra K. Ager

Thomas S. Ager

You will need Adobe Reader installed on your computer to view your sample



If you are not sure where this polling place is located or if your information is incorrect, contact your county auditor's office:

Hughes County Auditor 605-773-7451

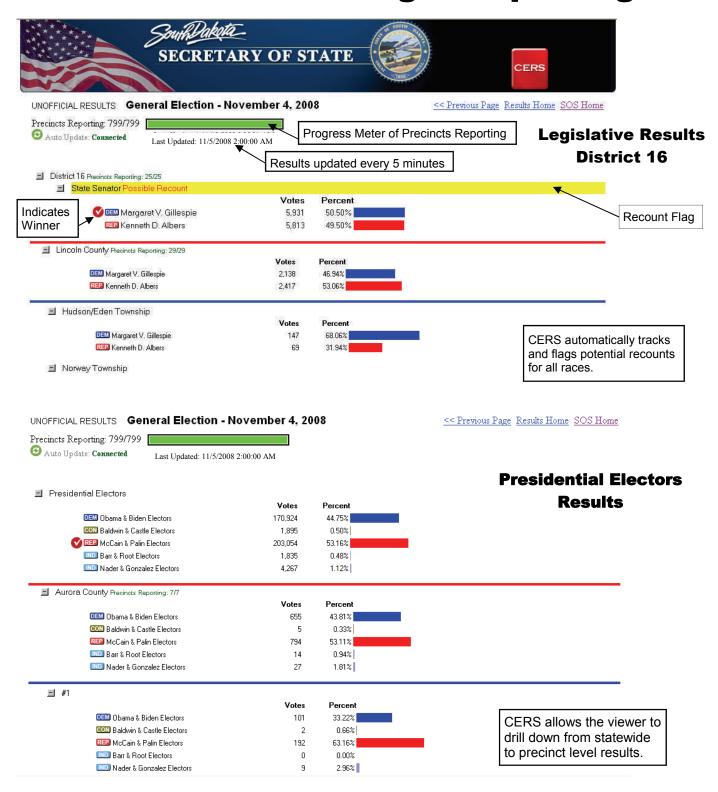
This precinct and polling place information is valid for Primary and General Elections only. Your precinct and/or polling place may change up to eleven days before Election Day. Auditor contact information for all 66 South Dakota counties. http://www.sdsos.gov/electionsvoteregistration/auditorcontactinformation.shtm

Voter Information and Partial Sample Ballot

SAMPLE GENERAL ELECTION BALLOT 36001 November 04, 2008 **Hughes County, South Dakota** Page 1 of 3 For United States Representative To vote for a person FILL IN the oval NONPOLITICAL BALLOT you may vote for one or leave it blank (•) next to the name. To vote on a ballot question FILL IN the oval (●) next to "yes" or "no". Stephanie Herseth Sandlin Constitutional Amendment(s) The following amendment(s) to the State If you make a mistake, give the ballot Democratic Party Constitution (is/are) submitted to the back and get a new one. **Chris Lien** voters by the Legislature or by petition. **DO NOT** cast more votes than are Republican Party The amendment(s) will not become allowed in each race effective unless approved by majority vote. For Presidential Electors For Public Utilities Commissioner you may vote for one slate or leave it blank you may vote for one or leave it blank **Constitutional Amendment G** Obama & Biden Electors Matt McLarty Title: An Amendment to the South Dakota Democratic Party Democratic Party Constitution, to repeal certain Gary Job Eugene R Hidalgo reimbursement restrictions for travel by Catherine V. Piersol legislators to and from a legislative Constitution Party Jack Billion session **Gary Hanson** Baldwin & Castle Electors Attorney General Explanation: Republican Party Constitution Party Constitution fixes the mileage Steve Willis reimbursement rate for legislators at five For State Senator Larry Johnsen cents per mile for their travel to and from a District 24 **Brandon Michels** legislative session. you may vote for one or leave it blank Constitutional Amendment G would McCain & Palin Electors repeal this constitutional limitation. Republican Party Kim Sargent Mike Rounds Yes A vote "Yes" will change the Democratic Party **Dennis Daugaard** Constitution Larry Long **Bob Gray** Republican Party Barr & Root Electors No A vote "No" will leave the Independent Constitution as it is. For State Representative

District 24

CERS Election Night Reporting



Election Night Reporting Maps

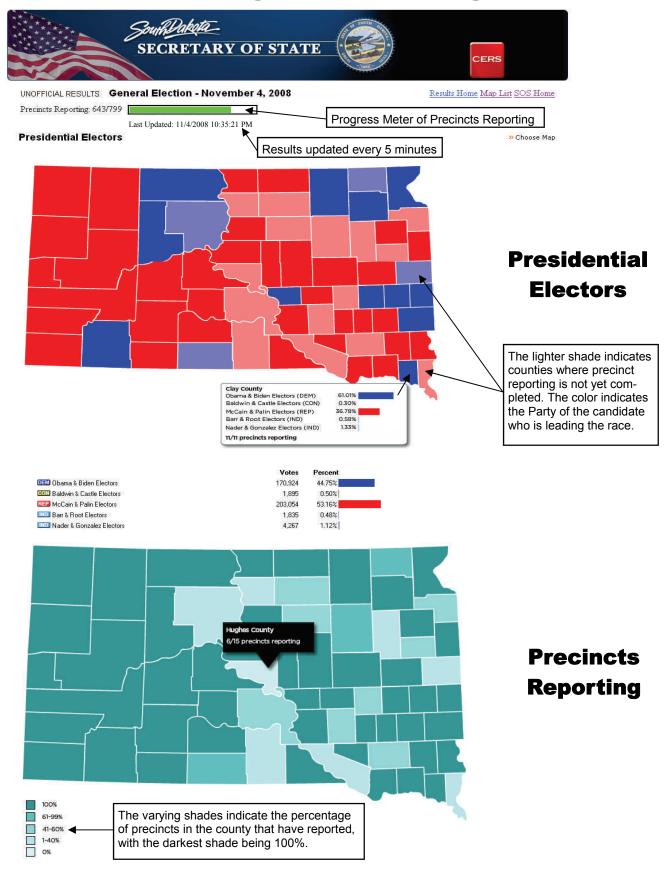


Exhibit 4—Central Election Reporting System, South Dakota Secretary of State

County and Statewide Canvassing

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	Presidential Delegates and Alternates					United States Senate				United States Representative						Governor				
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Arlington Precinct	55	39	117	7	31	249	163	95	15	273	44	6	57	12	80	51	250	70	192	262
Badger Precinct	28	9	57	58	22	174	78	34	62	174	12	18	13	44	31	33	161	121	51	172
DeSmet Precinct	47	93	157	201	33	631	247	190	113	660	72	33	176	38	200	20	639	203	288	491
Iroquois Precinct	38	23	8	5	47	121	18	14	56	88	8	16	15	19	37	14	109	36	48	84
Lake Preston Precinct	17	44	84	31	38	214	145	79	33	267	19	69	9	54	8	35	194	47	191	238
Oldham Precinct	10	17	37	22	15	101	76	26	18	120	33	12	8	5	10	17	85	46	89	136
Total	195	225	460	324	186	1,390	727	438	297	1,482	188	154	278	172	366	170	1,328	523	859	1,382
	3.51%	4.05%	8.27%	5.83%	3.34%	l	13.07%	7.87%	5.34%		3.38%	2.77%	5.00%	3.09%	6.58%	3.06%		9,40%	15.44%	

		DEM																
	Presidential Delegates and Atternates					United States Senate			United States Representative				Governor					
	Barack Obama	Hilary Clinton	John Edwards	to be Uncommitted	Total	George MoGovern	Tim Johnson	Total	Denny Joshua Poprson Jr.	Dick Casey	Rick Weiland	Stephanie Herseth Sandin	Total	Jim Albott	Jim Bug	Jim Hutmacher	Ron Vdesky	Total
Arlington Precinct	29	91	59	48	227	172	69	241	51	37	23	103	214	42	15	37	82	178
Badger Precinct	14	12	48	12	86	18	48	66	12	39	6	40	97	36	5	10	46	97
DeSmet Precinct	125	40	86	45	298	21	127	148	31	95	64	90	280	57	127	43	30	267
Iroquois Precinct	43	28	6	5	82	82	17	98	16	27	15	36	94	-8	33	28	9	78
Lake Preston Precinct	22	11	60	48	141	22	89	111	26	58	36	27	147	48	25	18	22	113
Oldham Precinct	6	12	28	25	71	9	41	60	30	10	15	25	80	4	44	18	6	72
Total	239 7.19%	194 5.84%		183 5.51%		324 9.75%		716	166 5.00%	266 8.00%	159 4.78%	321 9.66%	912	195 5.87%		154 4.63%	195 5.87%	793

County Canvass Report

CERS automatically generates the canvass reports for both the county canvassers and State Board of Canvassers. No additional entry of any numbers is required. After the Canvass Board and Auditors have conducted their canvasses, a certificate is automatically generated for the board members to sign.

	Oberna & Biden Electors DEM	Baldwin & Castle Electors CON	McCain & Polin Electors REP	Berr & Root Electors IND	Nader & Gonzaloz Electors IND	Total
Aurora	655	5	794	14	27	1,498
Beadle	3493	39	4054	44	84	7,714
Bennett	557	11	614	7	19	1,208
Bon Homme	1367	21	1712	16	59	3,176
Brookings	7207	68	6431	83	156	13,945
Brown	9041	72	8067	73	173	17,428
Brule	965	16	1407	18	33	2,438
Buffalo	454	1	156	1	7	618
Butte	1306	45	2821	33	51	4,268
Campbell	243	8	591	2	10	864
Charles Mix	1807	8	2109	13	41	3,978
Clark	830	10	1065	15	20	1,940
Clay	3808	19	2296	36	83	6,242
Codington	5595	48	6374	59	109	12,186
Corson	837	9	535	9	16	1,408
Custer	1475	44	2909	22	57	4,607
Davison	3554	41	4731	39	90	8,456
Day	1785	11	1372	10	27	3,206
Deuel	1054	23	1088	13	40	2,218
Dewey	1328	13	659	5	14	2,018
Douglas	424	9	1293	9	21	1,768
Edmunds	819	12	1213	9	23	2,076
Fall River	1338	43	2348	26	54	3,809
Faulk	426	5	739	4	18	1,192
Grant	1786	16	1951	21	56	3,830
Gregory	771	11	1423	13	29	2,247

Partial State Canvass Report

Exhibit 5—Central Election Reporting System, South Dakota Secretary of State