**Options for Administering Ranked Choice Voting Elections in Your Community**

Ranked choice voting (RCV) is a proven voting method that has been used for major elections in the United States and other nations for more than a century. Historically, RCV elections have been hand-counted, but optical scan machines today can be modified to run RCV elections. The latest machines in federal testing from the largest vendors (ES&S, Dominion and Hart Intercivic) are expected to include options to allow jurisdiction to administer RCV elections.

Following is a short summary of options for administering RCV elections. (Note: Each procedure can and should come with an audit procedure that is not detailed here.)

**I. Using Major Manufacturer Voting Systems Configured for Ranked Choice Voting**

If the jurisdiction prefers to use machines calibrated for RCV elections and either must use or prefers to use federally certified systems or systems provided by major manufacturers, there are options for tabulating an RCV election using certified, major manufacturer equipment.

One option is simply to do a hand-count. Hand tallies are consistent with federal certification. Another option that we believe all major vendors can do or soon will be able to do is have each voter indicate candidate preferences on a ranked choice voting ballot, then export the data from that voter’s preferences into a format compatible with commercial-off-the-shelf spreadsheet software. This option is discussed in more detail in the next section.

Relating to the goal of a direct RCV tabulation, two of the three biggest manufacturers have voting systems currently undergoing formal federal testing prior to certification. Dominion has an RCV-ready system called *Dominion Suite 4.14* that has been in the certification process since May 2012 and is currently in its first round of testing. Based on timelines from prior certifications, this system should be certified in two to six months. Hart Intercivic has an RCV-ready system called *Verity Voting 1.0* which began the certification process in December, 2012 and has not yet gotten to the testing phase, meaning that it should be certified within about a year.

The ES&S system currently undergoing testing, *EVS 5.0.0.0*, does not include functions for RCV, though ES&S has indicated to election officials in Minnesota that it plans to offer a free software upgrade to its DS-200 tabulator, which is a component of all of its currently certified systems as well as the *EVS 5.0.0.0* system, that would permit it to count ranked ballots.

There is currently only one federally certified voting system that has been specifically certified for RCV elections: Unisyn’s *OpenElect 1.1*. Unisyn is one of the smaller vendors with a certified system.
II. Two centrally coordinated/counting options: Count voters’ first choices on current machines at the polls and then, at a central collection, either collect ballots or coordinate regional/precinct counts to conduct the RCV tally in one of two ways:

1) by hand, with or without the assistance of a spreadsheet program (as was done in Minneapolis (MN) in 2009;
2) by a combination of manual sorting and machine scanning (as was done in many North Carolina counties in 2010).

The simplest option for administering an RCV election is to use existing precinct machines to count first choice tallies. In the event that this precinct count does not determine the outcome of all RCV races, collect ballots in a central location or have central coordination of local regional/precinct counting in order to tally ballots by hand or with machines following a hand-sort.

In 2009, for example, Minneapolis (MN) scanned first choices at precincts and conducted a hand-count in a citywide election for mayor, 13 seats on the city council and several other offices (including some with multi-seat RCV that involved transfer of “surplus” votes). The data from hand-counted ballots was ultimately entered into an Excel spreadsheet which ran the final tally; as a commercial off-the-shelf (COTS) product, Excel is accepted as a certified tallying system.

Former city elections director Patrick O’Connor, who oversaw this implementation of RCV, said in 2010: "I have had the great fortune to be a small part of what could easily be considered the most significant civic exercise in the history of Minnesota government: the implementation of the first Ranked Choice Voting election in Minneapolis and in Minnesota. We proved that it could be well-administered, quickly and accurately counted, and that voters had little problem with the concept."

RCV elections in North Carolina have demonstrated two central count approaches. In an interview posted here (http://archive.fairvote.org/?page=2543), the executive director of the Wake County Board of Elections Cherie Poucher talks positively about her experience in the 2007 elections in the City of Cary, where ranked choice voting (in that city called “instant runoff voting”) was used.

A city of more than 100,000 people, Cary in 2007 used RCV to elect its mayor and several city council seats. It developed a ballot that could be counted on existing voting equipment, with that equipment allowing three rows of choices to be counted on machine. All votes in the first choice row were tallied at the polls on existing equipment, with error notification for anyone voting for more than one candidate in this first choice row.

In the 2007 election in Cary, there was a first choice majority winner in the races for mayor and in all but one council race. In that race, ballots were transported to a central counting place (using procedures comparable to those procedures carried out for all elections in the event of the need for a recount). There, ballots were hand-sorted according to their first choices. Ballots listing one of the two advancing candidates as a first choice were not recounted; ballots listing the remaining candidates were allocated to one of the two runoff candidates based on who was ranked next on the ballot, and those ballots were then hand-counted.

Wake County’s Poucher reports that this process was straightforward. The total expenses necessary to implement RCV were $9,000, with those costs including an educational mailing sent to all Cary residents and approximately $500 for the hand-sort and count of the District B race ballots.
In 2010, North Carolina held a statewide RCV election for a vacancy on the state’s Court of Appeals. There were 13 candidates in this nonpartisan election, with voters able to rank up to three candidates. More than 1.9 million valid ballots were cast in this race, and more than one million ballots were cast on optical scan ballots. (See http://www.NCVotes123.com.)

The procedure involved each county holding a central count. It was similar to what was done for Cary in 2007, but instead of hand-counting centrally, ballots instead were rescanned. Different optical scan machines were used to count first, second or third choices based on where one of the runoff candidates was ranked on each ballot. After the election was completed, an Associated Press article reported on the election’s outcome and included this statement from North Carolina elections director Gary Bartlett. “Bartlett said there were no major problems with the count and voters got to participate in picking the winner. ‘Whether you like it or not, it worked,’ he said.”

III. Work with private vendor for centrally scanned count, as in Portland (ME) in 2011

Jurisdictions able to incorporate the use of voting systems that do not have federal and/or state certification can work with an independent vendor in a central count (or centrally coordinated regional counts). Such a jurisdiction would run its elections just as usual, with a sensible ranked choice voting design, and count first choices as usual on its current machines. If the outcome was not determined by the first choice count, ballots would then be collected centrally or in regions, where the independent vendor would use its system to scan the ballots and generate the RCV results.

Takoma Park (MD) used such an approach in 2007 with TrueBallot, a company that mostly conducts private elections, such as for unions. In 2011, the city of Portland (ME) worked with TrueBallot in its November 2011 mayoral election, and Cambridge (MA) has worked with TrueBallot as a consultant for its multi-winner RCV elections for city council and school committee. Clear Ballot is an example of another vendor with this capacity.

TrueBallot representative Caleb Kleppner wrote the following in response to FairVote’s query about how the company does the RCV tally:

“We would propose that the city use its own voting equipment to count the non-RCV race on the ballot, to provide error notification (“second chance voting”) to voters voting RCV elections in precincts, and to provide unofficial first choices for the two RCV races on the ballot (mayor and city council). After polls close, the city then removes the ballots from the precincts and delivers the ballots to us for scanning.

“We use image scanners to create digital images of each ballot, which we then immediately return to the city for sealing and storage. After imaging the ballots, we process the images to detect the voters’ marks, review the images to ensure that we counted each ballot as the voter intended, automatically produce rankings for the RCV tally, export the rankings, run ChoicePlus Pro (the open source software used by Cambridge) and produce results. Doing this process in Portland (ME) resulted in full results the day after the election.

“There are several benefits to our approach. First, because we create a digital image of the entire ballot, we have enormous flexibility in terms of ballot layout and rankings. In particular, we can combine both ranked choice and non-ranked choice races on the same ballots. Second, we produce open format data that allows anyone to verify every ballot and every step of the RCV tallying process. Third, we provide a tabulation that is independent of the original system. Finally, we are probably less expensive than most other options.”
IV. Export data from new machines for a count using commercial, off-the-shelf software (similar to method used in several counties in North Carolina):

Many jurisdictions now use digital scanning machines that should be able to capture the image of each ballot and export data from that process into a format that can be read by a commercial, off-the-shelf software spreadsheet such as Excel. Dominion, which in 2010 became the nation’s second largest vendor after purchasing Premier and Sequoia, is able to do this with its currently certified system. ES&S reports that it should be able to do so with soon-to-be-certified equipment.

Exporting RCV data and doing final RCV tallies in Excel already has been done. North Carolina State Board of Elections developed this process for RCV elections in Hendersonville (NC) in 2007 and 2009. (The city would have again used RCV in 2011 if more candidates had run and has voted to use it in November 2013.) It was used in North Carolina’s 2010 statewide RCV elections in a number of counties where collectively more than a half million RCV ballots were cast.

Hendersonville and these counties have ES&S’ I votronic Direct Recording Electronic (DRE) machines that, like digital scanners, capture ballot images. The State Board certified a process for exporting this data into an Excel spreadsheet for an RCV count if one were needed. This approach would mean that all ballots would be counted at the polls on the same machines. Implementation costs would be minor after establishing the data conversion process. The Excel tally is relatively easy to develop and has been done for the “instant runoff” form of RCV in North Carolina and the “single transferable vote” form of RCV in Minneapolis.

For more information: If you have any questions, please do not hesitate to contact FairVote at (301) 270-4616. Staffers with particular expertise on this issue include executive director Rob Richie (rr@fairvote.org) and legal fellow Drew Spencer (dspencer@fairvote.org).