

Instant-Runoff Voting

Instant-runoff voting is a system of voting that allows voters to rank their preference for an office among multiple candidates. In November 2006, Minneapolis voters approved this method of voting for candidates for city offices beginning in 2009. This information brief answers basic questions about how instant-runoff voting works.

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What is Instant-Runoff Voting?

Instant-runoff voting (IRV), sometimes called “ranked order” or “single transferable vote” voting, allows voters to rank their preferences for a particular office among multiple candidates. Although the precise methods of vote tabulation can vary, in the end the system is designed to ensure that the winner has the support of a majority of voters. In most cases, an instant-runoff system can eliminate the need for a separate primary election.¹ Electronic voting systems typically allow this runoff process to occur instantaneously, hence the term “instant runoff.”

What does an IRV ballot look like?

An IRV ballot allows voters to rank their preferences for particular candidates on the ballot by indicating their first, second, and third choices (and so on, if necessary). The precise look of an instant-runoff ballot may vary depending on the jurisdiction, but it would appear differently than a traditional “check one candidate” ballot. The following diagram is an example of how an optical-scan IRV ballot might appear in a fictional race for governor:

OFFICIAL BALLOT	STATE GENERAL ELECTION BALLOT			
Judge _____ Judge _____	NOVEMBER 7, 2006			
INSTRUCTIONS TO VOTERS				
To vote, completely fill in the oval(s) next to your choice(s) like this: 				
GOVERNOR				
<small>Fill in the oval marked “1st choice” opposite the name of the candidate who is your first choice and in the ovals marked “2nd,” “3rd,” and “4th” choice opposite the names of other candidates in order of your preference. You may only choose one candidate for each preference choice, and only one preference choice for each candidate. Ballots that mark more than one preference for a single candidate, or more than one candidate for a single preference level, will not be counted.</small>				
	1 st Choice	2 nd Choice	3 rd Choice	4 th Choice
Charlie Brown	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paul Bunyan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nick Carraway	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mary Richards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

¹ Instant-runoff voting is distinct from “cumulative voting,” which allows voters to weight their selection(s) by giving them a set number of “votes,” which can be distributed as the voter desires among the eligible candidates.

How are IRV votes counted?

Methods of vote tabulation may vary slightly, but for purposes of illustration, an IRV process might look like this:²

Step One: Determine whether a first-choice majority exists.

In a fictional election using the ballot shown above, voters may (but are not required to) rank their top four choices for governor. In order to win, a candidate must receive a majority (at least 50 percent plus one vote). In the fictional example, 1,000 voters made the following selections:³

Raw Vote Totals

Candidate	First Choice	Second Choice	Third Choice	Fourth Choice
Charlie Brown	300 (30.0%)	180	179	105
Paul Bunyan	220 (22.0%)	315	100	215
Nick Carraway	200 (20.0%)	300	312	100
Mary Richards	280 (28.0%)	175	109	120
Totals	1,000 (100%)	970	700	540

Because each voter is permitted only one total vote in the election, the choices that determine a winner are the first-choice selections only. Here, even though Charlie Brown has the greatest number of first-choice selections, none of the candidates has earned a majority of votes. Therefore, an “instant runoff” is initiated.

Step Two: Eliminate the candidate with the fewest first-choice votes.

Nick Carraway received the fewest number of “first-choice” selections on election day. Therefore, to conduct the instant runoff, his name is removed from the vote tabulation and the ballots are recounted. This time, the 200 voters who chose Nick Carraway as their first choice will instead have their second choice vote credited to that candidate. The second-choice selection could be any of the remaining three candidates. Following this process, the new totals look like this:

Instant Runoff: Round One

Candidate	First Choice	Additional Votes	Result
Charlie Brown	300	+ 75	375 (37.5%)
Paul Bunyan	220	+ 25	245 (24.5%)
Nick Carraway	200	Eliminated	Eliminated
Mary Richards	280	+ 100	380 (38.0%)
Totals	800	200	1,000 (100%)

In this case, the first instant-runoff round still does not produce a majority of support for any one candidate. Mary Richards now has more support than Charlie Brown, but candidates must earn a majority—not a plurality—of votes to win.

² The example here is based on the method approved by voters in November 2006 for use in Minneapolis city elections.

³ For the sake of simplicity, the voter turnout is artificially low.

Step Three: Repeat step two; eliminate the candidate with the fewest first-choice votes.

Once again, the candidate with the lowest amount of support is eliminated. This round, Paul Bunyan has the fewest number of votes. Therefore, his name is eliminated, and those who chose Paul Bunyan as their first choice will have their second-choice selection counted. If their second choice was the previously eliminated “Nick Carraway,” then their third choice is counted. This process produces the following results:

Instant Runoff: Round Two

Candidate	First Choice	Additional Votes (Round One)	Additional Votes (Round Two)	Result
Charlie Brown	300	+ 75	+ 95	470 (47.0%)
Paul Bunyan	220	+25	Eliminated	Eliminated
Nick Carraway	200	Eliminated		Eliminated
Mary Richards	280	+ 100	+ 150	530 (53.0%)
Totals	580	175	245	1,000 (100%)

This time, Mary Richards gained enough votes from Paul Bunyan’s supporters to earn a majority of the total votes (53 percent). The instant runoff is finished, and Mary Richards is declared the winner. Charlie Brown initially had the greatest number of first choice votes, but Mary Richards has a majority of combined support as compared to Charlie Brown, even though fewer people selected her as their first choice.

It is important to note that at no point in the process did the total number of votes counted exceed the total number of voters: 1,000. With IRV, even though voters may rank their preferences, they still are permitted only one total vote for any one office.

To ensure consistency and accuracy, typically the raw IRV vote rankings must be collected from each polling place and counted at one central location. If votes are counted in “bundles” at separate locations, it may affect the runoff results if some precincts have stronger or different preferences than others.

Contingencies: What if...?

...no candidate has a majority after all possible rounds of the runoff?

This might occur if there were more candidates on the ballot than there were available preferences to rank. If the runoff were to be exhausted without a majority of votes for one candidate, the candidate with a plurality at that point would be declared the winner.

...there is more than one open position (such as in a city council election)?

If more than one office is open, then the requirement for a candidate to win would be different than the “50 percent plus one vote” majority in the example. The amount required would be a modified “majority” number calculated based upon the number of seats available. The calculation divides the total number of votes cast by the number of available seats plus one, then adds one more vote. For example, in the fictional election for governor, with one open seat, a

candidate must earn $(1,000 / (1 + 1)) + 1$, or 501 votes. If there were three seats available, each winning candidate would need to earn $(1,000 / (3 + 1)) + 1$, or 251 votes to win.

...a voter wants to vote for a write-in candidate?

A space on an instant-runoff ballot can be reserved for write-in candidates in the same way as it is on a traditional “check one candidate” ballot. The voter could then write in an individual and assign a rank according to his/her preference. Counting write-in votes creates a complication, because the potential number of different write-in candidates could quickly exhaust the runoff process. Some IRV plans call for all write-in candidates to be eliminated if the total number of combined votes for all write-in candidates is lower than the lowest vote total for a listed candidate.

...there is a tie among the last-place candidates?

Like write-in candidates, the potential for a tie amongst candidates with the fewest first-choice votes creates a unique difficulty necessitating a pre-determined set of procedures. If more than one candidate has the lowest amount of first-choice support, the potential outcome of the election could hinge on which candidate is eliminated from the runoff process. Procedures for addressing tie-situations could include eliminating one candidate randomly, or eliminating all candidates tied for last place.

...a voter attempts to mark one candidate as her first, second, and third choices, or a voter marks more than one candidate as her first choice?

A voter may only mark one unique candidate for one unique preference on the ballot. If a voter attempted to “help” a candidate by marking each preference, or by marking more than one candidate at the same level of ranking, that ballot would be declared void and would not count.

Effects: How does IRV affect...?

...election administration costs?

Depending on the jurisdiction, voting equipment may need to be purchased or upgraded to process and count ranked-vote ballots. In addition, there may be added costs to develop an appropriate new ballot itself, train election judges, and educate voters about the new processes and procedures.

...minor party candidates?

IRV systems might encourage more support for minor party candidates, because it eliminates the potential “spoiler” effect. That is, voters have a greater incentive to mark a minor party candidate as their top choice, because they would be able to list a “major” party candidate as a second choice (if they so desired), which would transfer to their first choice vote in the event a minor party candidacy fails early on in the runoff.

...partisan primary elections?

Unless a party chooses otherwise, partisan primary elections are unaffected by IRV. Even if a general election were held using IRV, any primary election to select a party's nominee for office would be conducted according to that party's rules, which may or may not incorporate an instant-runoff process.

Who uses IRV?

In the early twentieth century, forms of IRV were adopted in several major American cities for use in local elections, including Cincinnati, Cleveland, Sacramento, and New York City. Each of these cities has since discontinued use of the system. The city of Cambridge, Massachusetts, adopted an IRV-style method in the 1940s, which continues in operation today.

In 2002, San Francisco became the first American city in recent times to adopt IRV. It has since been implemented in Burlington, Vermont, and Takoma Park, Maryland. In November 2006, measures passed in Pierce County, Washington, and Oakland, California. Voters in a number of other cities have approved measures authorizing the use of IRV at some future date.

The states of Louisiana, South Carolina, and Arkansas use instant-runoff voting for overseas voters in runoff elections. North Carolina passed a pilot program that will use IRV for judicial seats as well as in a number of cities and counties.

In Minnesota, attempts have been made to implement forms of IRV at various points in history. One plan, in Duluth, was declared unconstitutional in 1915. The city of Hopkins conducted elections under its city charter using the instant-runoff method beginning in 1947; the process was repealed in 1959. More recently, a variety of municipalities have exhibited some interest in implementing instant-runoff voting. In 2006, voters in Minneapolis approved a plan to conduct citywide elections using the instant-runoff method, beginning in 2009.

IRV is also used by some colleges and universities, nongovernmental organizations, and in several jurisdictions outside of the United States, including elections for mayor of London, president of Ireland, and the national legislature in Australia.

Do local governments need authorization to use IRV?

Minnesota's statutes require elections to be conducted consistently and in accordance with a specific set of procedures, unless otherwise provided by law. In other words, if a local government body seeks to implement IRV, it must secure authorization, enacted into law by the legislature. Home-rule charter cities are not required to seek legislative authorization if the IRV process is incorporated into the city charter.

Is IRV vulnerable to legal challenges?

Under the U.S. Constitution, states have the authority to conduct elections in a manner of their choosing. Elections have historically been conducted by awarding the office to whichever candidate received the highest number of votes. This, however, is tradition and is not constitutionally required.

Any methods of voting must still comply with the rights enumerated under both the U.S. and Minnesota Constitutions, including the “one person, one vote” principle. In 1915, a form of ranked voting was deemed unconstitutional by the Minnesota Supreme Court because it had the effect of giving some voters the weight of more than one vote relative to other voters in the same election.⁴ A court is more likely to declare unconstitutional any IRV method that has the effect of giving some voters more power than others, even if the voter is unaware of this disparity on election day.

For more information about elections, visit the elections area of our web site, www.house.mn/hrd/issinfo/elect.htm.

⁴ *Brown v. Smallwood*, 153 N.W. 953 (Minn. 1915).