

Preferential Voting

Our current election system is unwieldy and can lead to both protracted repeated balloting and to results that are not in line with the preferences of the majority of voters. The UFOC therefore proposes a change to our voting rules and practices to resolve these concerns. We propose a shift to an online preferential voting system that uses “Condorcet methods” to tally votes. This system will yield a ranked order of candidates that reflects the collective will of the electorate after a single ballot.

The proposed voting system works as follows: After the nomination process (which would remain unchanged), all voting faculty would be sent an email soliciting their votes. The voting would be conducted online using a highly secure website designed for the purpose (<http://www.cs.cornell.edu/w8/~andru/civs/>). Voting would consist of rank ordering the candidates from most preferred to least preferred. The website tallies these ranks and generates a list of candidates in order of overall preference. Thus, elections requiring more than one winner can be handled with one round of voting. Results would be forwarded from the website to the UFOC (or FOC in the case of a college-wide election) and winners would then be announced to the faculty.

A crucial element of this proposal is the voting tally process, called *Condorcet methods*. Winners are determined by a simultaneous round robin in which each candidate is considered in a head-to-head election against every other candidate. The winner of each head-to-head pairing is determined by a simple majority of preferences. For example, if Alice is given a rank of 2 and Bob receives a 4, Alice would be awarded the vote on that ballot. Head-to-head preferences are calculated for each ballot then summed across all ballots. The election winner is the candidate preferred head-to-head to all other candidates on the majority of ballots. The runner up is the candidate preferred to all other candidates except the winner.*

This process represents a substantial improvement over the current one for the following reasons:

1. **No runoffs are required.** In the recent past, elections have dragged on for weeks. This can happen any time there are a number of candidates with limited support, or when there is a true three-way split for two positions. The Condorcet method proposed here returns a result instantly, with no need for run-offs even for multiple seat elections.
2. **Elections will be fairer.** Our current system requires that a candidate be eliminated if they have the fewest votes and no other candidate has reached a majority. This rule can lead to situations where a candidate who is a widely popular second choice is eliminated because s/he is only rarely a first choice. This could lead to the election of a candidate who is less preferable to a majority of voters than the candidate who was eliminated.
3. **Three way splits can be resolved.** In cases where three candidates are vying for two positions, current voting rules require repeated runoffs until one candidate reaches the 40% criterion. The proposed system resolves this seamlessly.

Potential Concerns

1. **Voting will be harder.** It is true that completing the initial ballot will be somewhat more difficult for preferential voting. However, the elimination of runoff ballots compensates for the effort.
2. **The system can be “gamed.”** While any voting system can be used strategically, most of the common strategies are less useful in a preference system. For example, giving an artificially low rank to a moderately preferred candidate who is perceived to be a strong competitor to the most preferred candidate will not help the most preferred candidate. Because votes are tallied for head-to-head comparisons, the first choice candidate will get a single vote in either case. Mathematicians have demonstrated that Condorcet methods are not susceptible to this technique and that sincere voting is typically the most efficient way of obtaining results in line with one’s preferences.
3. **It’s hard to implement.** Fortunately, the Computer Science department at Cornell has established a free, secure, and reliable website for managing these types of elections. This site is fairly easy to use and will actually represent an improvement on current technology.
4. **How do voters express indifference?** More than one candidate can be given the same rank. For example, if there are four candidates and a voter really likes A, cannot abide B, and is indifferent between C & D, then they may rank the candidates A – 1, B – 3, C – 2, D – 2. This would have the effect of awarding a vote to A over all other candidates and B and C over D, but not distinguishing C and D. This perfectly reflects the voter’s preferences.

Further Reading

Condorcet Internet Voting Service documentation
<http://www.cs.cornell.edu/w8/~andru/civs/>

Wikipedia entry for Condorcet method
http://en.wikipedia.org/wiki/Condorcet_method

Condorcet Voting Explained
http://minguo.info/election_methods/condorcet/condorcet_voting_explained

Technical Evaluation of Election Methods
http://minguo.info/election_methods/evaluation
