

2.18.09 More Notes from Douglas Marks to Marilyn Marks on IRV:

The counting method has some flaws. There are potential hazards of splitting your vote so thin in the Mayor's that the runoff is between two candidates of "one" party.

See the attachment I sent you about the sequential elimination techniques where a higher ranking could hurt your candidate, which certainly doesn't represent the best will of that individual voter.

For the Mayor's race people can decide if they like batch or SE better, both have flaws/anomalies. I specifically didn't say which of these was best, just that the batch elimination was the technique you were currently using and my general feeling is that unless IRV was presented as a way to eliminate those flaws (not just as a way to save money/hassle) then the IRV system should model your current runoff system. If there were a "perfect" IRV system then that would be a different issue, but they all have flaws. The real problem I have is for SE for a two seat system when the seats are filled one at a time. **This method really gives preference to the voters whose candidate wins the first election.**

Let me try an example with 4 candidates running for the two seats, using SE.

Consider the following tallies of candidates' vote totals after each round.

C\R	1	2	3	4
A	7	7	9	Winner
B	4	4	X	X
C	4	6	8	X
D	2	X	X	X

Then the ballots are recounted taking all the people who voted for A and looking at where their first place votes go.

C\R	1	2	3
B	4	X	X
C	6	8	X
D	7	9	Winner

So viewed as two entirely separate elections everyone receives one vote in each. However it is one election for two seats. Everyone who

cast their first choice for Candidate A has their second choice fully considered for the second seat. Everyone who cast their first choice for Candidate C **never** had their second choice count. **The people who voted for A effectively get to bank their top choice and then play kingmaker with the remaining candidates,** in this example taking the least popular candidate for the first seat and propelling them to victory for the second seat. If the second choice of all voters was looked at the same as voters for Candidate A then the result could have been different. Consider the 17 ballots on the next page that result in that outcome and we'll examine how the traditional counting systems would have decided the election. Each ballot is only marked as far as it would be counted in either SE or the traditional election.

V1	1	2	3	4
A	X			
B				
C				
D		X		

V8	1	2	3	4
A		X		
B	X			
C				
D			X	

V2	1	2	3	4
A	X			
B				
C				
D		X		

V9	1	2	3	4
A		X		
B	X			
C				
D			X	

V3	1	2	3	4
A	X			
B				
C				
D		X		

V10	1	2	3	4
A				
B	X			
C		X		
D				

V4	1	2	3	4
A	X			
B				
C				
D		X		

V11	1	2	3	4
A				
B	X			
C		X		
D				

V5	1	2	3	4
A	X			
B				
C				
D		X		

V12	1	2	3	4
A				
B		X		
C	X			
D				

V6	1	2	3	4
A	X			
B				
C		X		
D				

V13	1	2	3	4
A				
B		X		
C	X			
D				

V7	1	2	3	4
A	X			
B				
C		X		
D				

V14	1	2	3	4
A				
B		X		
C	X			
D				

V15	1	2	3	4
A				
B		X		
C	X			
D				

V16	1	2	3	4
A				
B				
C		X		
D	X			

V17	1	2	3	4
A				
B				
C		X		
D	X			

Examine the tally from the traditional system where everyone gets two votes.

C\R	1
A	9
B	8
C	10
D	7

In this system where everyone's top two votes are equal A and C are elected and D would actually be ranked last. Not only is C elected in the traditional format but they are the candidates with the most first and second place votes. An iterated SE method gives too much weight to the people who cast their top vote for A. If C received the most 1st and 2nd place votes for a two seat election I think they should be elected.

The traditional voting methods have some flaws, however each of the flaws should be addressed independently of IRV. It does no good to replace one flawed system with another equally or more flawed system. Developing a specific set of criteria for what is meant by "best" is really needed to differentiate between what flaws are more egregious. I haven't had time to rigorously develop that criteria but it looks like to me the flaws with iterated SE for a two seat race would not measure up to many desired criteria for an election system.

For a single seat race like the Mayor's SE is ok, it's really just a matter of preference. Here my intuition is that it is best to approximate the traditional system with an IRV system and if you believe there were flaws in the traditional system work to have another vote on changing IRV techniques where removing the flaws of one system and replacing them with the flaws of another system is the central debate.