

To: OSVTAC
From: David Cary
Date: November 27, 2018

Subject: **RCV Report Formats**

I wanted to suggest some ideas for RCV report formats for the proof-of-concept results reporter some of you are developing. The core motivations for these suggestions are to:

- Make RCV reports easier to read and understand.
- Provide a summary report that more accurately reflects an RCV tabulation.

Examples of the suggested formats are attached, based on the final reported numbers for the 2016 Board of Supervisors District 7 contest. Examples include alternatives for a summary report and a round-by-round table of votes.

Some key features of these suggested report formats include:

- Summary reports show one vote total per candidate, the candidate's highest vote total across all rounds.
- Candidates are reported in reverse elimination order and decreasing order of each candidate's highest vote total.
- For reports of round-by-round vote totals in a single table:
 - ◆ Table cells are left blank after a candidate has been eliminated, except possibly to confirm that no votes are counting for the candidate. This helps reduce distracting, uninformative clutter in the report.
 - ◆ Each candidate's highest vote total is highlighted. This is the candidate's vote total just before being eliminated or the last-round vote total for the tabulation winner.
 - ◆ Vote transfer columns are presented as being between rounds rather than being part of a round on either side. No transfer column appears after vote totals and percentages for the last round.
 - ◆ The row containing the total of all votes counting for candidates and labeled "Continuing votes" in the example is the first row after the rows for reported candidates.

I hope you find some of these suggestions useful in your ongoing work.

Example RCV Report Formats

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Summary report: Based on 2016 Board of Supervisors District 7 Contest

The goal of an RCV summary report is to quickly convey the status of the RCV contest. This is accomplished by reporting just one vote total per candidate and leaving most other details to a report of RCV round-by-round vote totals.

The details of the layout for an RCV contest in a summary report would typically be coordinated with what is shown for non-RCV contests, including what kind of width one has to work with, for example if the report is formatted as 1-up, 2-up, or 3-up. For in-person, hardcopy reporting, especially on election night, using more compact formats means less paper and less time spent making copies.

To help keep it simple, some supplementary data that might be included in the the summary report for non-RCV contests, for example undervotes, overvotes, and total votes for candidates, doesn't have to be shown for RCV contests, provided that round-by-round contest level vote totals are separately but readily available, for example by clicking on a link in the summary report.

A minimalist summary presentation:

Board of Supervisors - District 7






[\(RCV Details\)](#)

Norman Yee	17,692
Joel Engardio	12,815
Ben Matranga	8,667
John Farrell	5,556
Mike Young	2,004

A summary presentation with additional information:

Board of Supervisors - District 7 [\(RCV Details\)](#)

63/63 100%

<u>Candidate</u>	<u>Votes</u>	<u>Round</u>	<u>Percent</u>	<u>Votes</u>
Norman Yee	17,692	4	57.99%	
Joel Engardio	12,815	4	42.01%	
Ben Matranga	8,667	3	25.44%	
John Farrell	5,556	2	15.86%	
Mike Young	2,004	1	5.68%	

Example RCV Report Formats

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Round-by-round report: Based on 2016 Board of Supervisors District 7 Contest

The following is an example of reporting RCV round-by-round results in a table. The highlighted vote totals are those reported in a summary report. For each candidate, that vote total represents the candidate's best showing in the tabulation and in a sense is the candidate's most critical vote total.

When candidates are appropriately sorted, those vote totals appear on what can be loosely described as the table's diagonal, and the structure of the tabulation is more readily apparent.

Board of Supervisors - District 7

	Round 1			Round 2			Round 3			Round 4	
	Votes	%	Transfer	Votes	%	Transfer	Votes	%	Transfer	Votes	%
Norman Yee	14,179	40.20%	493	14,672	41.88%	1,124	15,796	46.37%	1,896	17,692	57.99%
Joel Engardio	7,645	21.67%	331	7,976	22.76%	1,624	9,600	28.18%	3,215	12,815	42.01%
Ben Matranga	6,498	18.42%	335	6,833	19.50%	1,834	8,667	25.44%	-8,667	0	
John Farrell	4,948	14.03%	608	5,556	15.86%	-5,556	0				
Mike Young	2,004	5.68%	-2,004	0							
Continuing Votes	35,274	100.00%	-237	35,037	100.00%	-974	34,063	100.00%	-3,556	30,507	100.00%
Exhausted by Over Votes	128		2	130		11	141		12	153	
Other Exhausted Votes	4,084		235	4,319		963	5,282		3,544	8,826	
Total	39,486		0	39,486		0	39,486		0	39,486	