

RCV Example

7 messages

Deutsch, Herb <hdeutsch@essvote.com>

Thu, May 3, 2018 at 2:30 PM

To: George Gilbert <george.gilbert@rankedchoicevoting.org>, "L. Massa-Lochridge" <lauren.massa.lochridge.sf@gmail.com>

		Rou	ınd 1			Rou	ınd 2			Rou	ınd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	А	В	С	D	А	В	С	D	Α	В	С	D
2	В	А	D	С	В	А	D	С	В	А	D	С
3	С	В	А	D	С	В	А	D	В	А	D	
4	А	С	В	D	А	С	В	D	Α	С	В	D
5	В	С	А	D	В	С	А	D	В	С	А	D
6	А	С	В	D	А	С	В	D	Α	С	В	D
7	В	А	С	D	В	А	С	D	В	А	С	D
8	D	В	А	С	В	А	С		В	А	С	

9	С	В	А	D	С	В	А	D	В	А	D	
10	Α	В	С	С	Α	В	С	С	Α	В	С	С
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
А	4	40%			4	40%			4	40%		
В	3	30%	1		4	40%	2		4	60%		
С	2	20%			2	20%	-2		0			
D	1	10%	-1		0				0			



RCV_.Example.xlsx 11K

Deutsch, Herb <hdeutsch@essvote.com>

To: George Gilbert <george.gilbert@rankedchoicevoting.org>, "L. Massa-Lochridge" <lauren.massa.lochridge.sf@gmail.com>

Thu, May 3, 2018 at 2:43 PM

		Rou	ınd 1			Rou	nd 2			Rou	ind 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	Α	В	С	D	А	В	С	D	Α	В	С	D
4	А	С	В	D	А	С	В	D	А	С	В	D

6	А	С	В	D	Α	С	В	D	Α	С	В	D
10	А	В	С	C	Α	В	С	O	Α	В	С	С
2	В	А	D	С	В	А	D	O	В	А	D	С
5	В	С	А	D	В	С	А	D	В	С	А	D
7	В	А	С	D	В	А	С	D	В	А	С	D
3	С	В	А	D	С	В	А	D	В	А	D	
9	С	В	А	D	С	В	А	D	В	А	D	
8	D	В	А	С	В	А	С		В	А	С	
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
А	4	40%			4	40%			4	40%		
В	3	30%	1		4	40%	2		6	60%		
С	2	20%			2	20%	-2		0			
D	1	10%	-1		0				0			

From: Deutsch, Herb
Sent: Thursday, May 03, 2018 4:31 PM
To: 'George Gilbert'; 'L. Massa-Lochridge'
Subject: RCV Example

		Rou	ınd 1			Rou	ınd 2			Rou	ınd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	А	В	С	D	А	В	С	D	Α	В	С	D
2	В	А	D	С	В	А	D	С	В	А	D	С
3	С	В	А	D	С	В	А	D	В	А	D	
4	А	С	В	D	А	С	В	D	Α	С	В	D
5	В	С	А	D	В	С	А	D	В	С	А	D
6	А	С	В	D	А	С	В	D	Α	С	В	D
7	В	А	С	D	В	А	С	D	В	Α	С	D
8	D	В	А	С	В	А	С		В	Α	С	
9	С	В	А	D	С	В	А	D	В	А	D	
10	А	В	С	С	А	В	С	С	Α	В	С	С
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
Α	4	40%			4	40%			4	40%		

В	3	30%	1	4	40%	2	6	60%	
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D	1	10%	-1	0			0		

George Gilbert <george.gilbert@rankedchoicevoting.org>

To: "Deutsch, Herb" <hdeutsch@essvote.com>

Cc: "L. Massa-Lochridge" < lauren.massa.lochridge.sf@gmail.com>

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I preserved the basic format of your original tables, which may have some merit. I'm not wedded to it. See what you think and I will give your format more thought.

Gg

George Gilbert RCV Resource Center george.gilbert@rankedchoicevoting.org 336-906-0047

On Thu, May 3, 2018 at 5:43 PM, Deutsch, Herb hdeutsch@essvote.com wrote:

Here's the same spread sheet sorted by first choice round 1. There was also an error in the count for B round 3. It should have showed 6 but the % was correct.

		Rou	ınd 1			Rou	nd 2			Rou	nd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	А	В	С	D	А	В	С	D	А	В	С	D
4	А	С	В	D	А	С	В	D	Α	С	В	D
6	А	С	В	D	А	С	В	D	Α	С	В	D

Thu, May 3, 2018 at 5:43 PM

10	Α	В	С	С	Α	В	С	С	Α	В	С	С
2	В	А	D	С	В	А	D	С	В	А	D	С
5	В	С	А	D	В	С	А	D	В	С	А	D
7	В	А	С	D	В	А	С	D	В	А	С	D
3	С	В	А	D	С	В	А	D	В	А	D	
9	С	В	А	D	С	В	А	D	В	А	D	
8	D	В	А	С	В	А	С		В	А	С	
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
Α	4	40%			4	40%			4	40%		
В	3	30%	1		4	40%	2		6	60%		
С	2	20%			2	20%	-2		0			
D	1	10%	-1		0				0			

Sent: Thursday, May 03, 2018 4:31 PM **To:** 'George Gilbert'; 'L. Massa-Lochridge'

Subject: RCV Example

Here's a ballot example of RCV. It shows 4 candidates, 10 ballots and 3 rounds. It doesn't have all the corner cases of unvoted choices, overvoted choices, duplicate choices, etc. But it does show the candidate that had the most votes in the 1st round losing. I've pasted the spread sheet in below as well as attached the file. I thought about sorting thing but the order would change between rounds. Maybe

	Rou	ind 1			Rou	ind 2			Rou	ind 3	
1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
А	В	С	D	А	В	С	D	А	В	С	D
В	А	D	С	В	А	D	С	В	А	D	С
С	В	А	D	С	В	А	D	В	А	D	
Α	С	В	D	А	С	В	D	А	С	В	D
В	С	А	D	В	С	А	D	В	С	А	D
Α	С	В	D	А	С	В	D	А	С	В	D
В	А	С	D	В	А	С	D	В	А	С	D
D	В	А	С	В	А	С		В	А	С	
С	В	А	D	С	В	А	D	В	А	D	
Α	В	С	С	А	В	С	С	А	В	С	С
Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
4	40%			4	40%			4	40%		
3	30%	1		4	40%	2		6	60%		
	A B C A B A B A C A Total	1st Choice2nd ChoiceABBACBACBCACBADBCBABTotal%	ChoiceChoiceABCBADCBAACBBCAACBBACDBACBAABCTotal%Transfer440%	1st Choice2nd Choice3rd Choice4th ChoiceABCDBADCCBADACBDBCADACBDBACDDBACCBADABCCTotal%Transfer440%	1st choice 2nd choice 3rd choice 4th choice 1st choice A B C D A B A D C B C B A D C A C B D A B C A D B A C B D A B A C D B B A C D B D B A C B C B A D C A B A C A D B A D C A B C C A Total % Transfer Total 4	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice A B C D A B B A D C B A C B A D C B A C B D A C B C A D B C A C B D A C B A C D B A D B A C B A D B A C B A D B A C B A D B A C B A D B A C B A D B A D C B A B C C A B <	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice A B C D A B C B A D C B A D C B A D C B A A C B D A C B B C A D B C A B C A D B A C B B A C D B A C B B A C D B A C B A C D B A C B A C B A C D B A C B A C B A C D B A D C </td <td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice A B C D A B C D B A D C B A D C C B A D C B A D A C B D A C B D B C A D B C A D B C A D B C A D B A C B A C D B A C D B A C B A C D B A C D D B A C B A C D B A D C B A D C</td> <td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice A B C D A B C D A B A D C B A D C B C B A D C B A D B A C B D A C B D A B C A D B C A D B A C B D A C B D A B A C D B A C D B B A C B A C D B B A C B A D B A D B B A B<td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice A B C D A B C D A B B A D C B A D C B A C B A D C B A D B A A C B A D B A D B A B C A D B C A D B C B A C B D A C B D A C B A C B A C D B A C B A C B A D B A D B A C</td><td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Cho</td></td>	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice A B C D A B C D B A D C B A D C C B A D C B A D A C B D A C B D B C A D B C A D B C A D B C A D B A C B A C D B A C D B A C B A C D B A C D D B A C B A C D B A D C B A D C	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice A B C D A B C D A B A D C B A D C B C B A D C B A D B A C B D A C B D A B C A D B C A D B A C B D A C B D A B A C D B A C D B B A C B A C D B B A C B A D B A D B B A B <td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice A B C D A B C D A B B A D C B A D C B A C B A D C B A D B A A C B A D B A D B A B C A D B C A D B C B A C B D A C B D A C B A C B A C D B A C B A C B A D B A D B A C</td> <td>1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Cho</td>	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice A B C D A B C D A B B A D C B A D C B A C B A D C B A D B A A C B A D B A D B A B C A D B C A D B C B A C B D A C B D A C B A C B A C D B A C B A C B A D B A D B A C	1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 1st Choice 2nd Choice 3rd Choice 4th Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Choice 3rd Choice 2nd Cho

С	2	20%		2	20%	-2	0		
D	1	10%	-1	0			0		



RCV Tabulation Tests.xlsx

Deutsch, Herb <hdeutsch@essvote.com>

Fri, May 4, 2018 at 9:53 AM

To: George Gilbert <george.gilbert@rankedchoicevoting.org>

Cc: "L. Massa-Lochridge" < lauren.massa.lochridge.sf@gmail.com>

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Sent: Thursday, May 03, 2018 7:44 PM

To: Deutsch, Herb **Cc:** L. Massa-Lochridge **Subject:** Re: RCV Example

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		Rou	ınd 1			Rou	ind 2			Rou	nd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
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6	Α	С	В	D	Α	С	В	D	Α	С	В	D
10	А	В	С	С	Α	В	С	С	Α	В	С	С
2	В	А	D	С	В	А	D	С	В	А	D	С
5	В	С	А	D	В	С	А	D	В	С	А	D
7	В	А	С	D	В	А	С	D	В	А	С	D
3	С	В	А	D	С	В	А	D	В	А	D	

9	С	В	Α	D	С	В	Α	D	В	Α	D	
8	D	В	А	С	В	А	С		В	А	С	
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
А	4	40%			4	40%			4	40%		
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С	2	20%			2	20%	-2		0			
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1	А	В	С	D	А	В	С	D	А	В	С	D

2	В	Α	D	С	В	А	D	С	В	Α	D	С
3	С	В	А	D	С	В	А	D	В	Α	D	
4	А	С	В	D	Α	С	В	D	Α	С	В	D
5	В	С	А	D	В	С	А	D	В	С	А	D
6	А	С	В	D	Α	С	В	D	А	С	В	D
7	В	А	С	D	В	А	С	D	В	Α	С	D
8	D	В	А	С	В	А	С		В	Α	С	
9	С	В	А	D	С	В	А	D	В	Α	D	
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A few countif macros would make it pretty easy to keep straight.

On Fri, May 4, 2018, 12:53 PM Deutsch, Herb hdeutsch@essvote.com wrote:

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10	А	В	С	С	А	В	С	С	А	В	С	С
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Cc: Lauren Massa-Lochridge < lauren.massa.lochridge.sf@gmail.com >

I also think rather than trying to include all variants in a single data set we might consider multiple 10 ballot datasets for different variant tests as I did with the overvote set.

On Fri, May 4, 2018, 1:20 PM George Gilbert <george.gilbert@rankedchoicevoting.org> wrote:

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6	А	С	В	D	А	С	В	D	А	С	В	D
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2	В	А	D	С	В	А	D	С	В	А	D	С
5	В	С	А	D	В	С	А	D	В	С	А	D
7	В	А	С	D	В	А	С	D	В	Α	С	D
3	С	В	А	D	С	В	А	D	В	Α	D	
9	С	В	А	D	С	В	А	D	В	Α	D	
8	D	В	Α	С	В	Α	С		В	Α	С	

Cand	Total	%	Transfer	Total	%	Transfer	Total	%	Transfer	
Α	4	40%		4	40%		4	40%		
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С	2	20%		2	20%	-2	0			
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		Rou	ınd 1			Round 2				Rou	nd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	А	В	С	D	А	В	С	D	Α	В	С	D
2	В	А	D	С								

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L. Massa-Lochridge < lauren.massa.lochridge.sf@gmail.com>

To: George Gilbert <george.gilbert@rankedchoicevoting.org>, "Deutsch, Herb" <hdeutsch@essvote.com>

Hi Herb and George,

Are there any updates you have for me to put on the shared drive for today's meeting?

Thanks,

-Lauren

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Thu, May 17, 2018 at 10:34 AM

On Fri, May 4, 2018 at 10:25 AM, George Gilbert <george.gilbert@rankedchoicevoting.org> wrote:

I also think rather than trying to include all variants in a single data set we might consider multiple 10 ballot datasets for different variant tests as I did with the overvote set.

On Fri, May 4, 2018, 1:20 PM George Gilbert <george.gilbert@rankedchoicevoting.org> wrote:

Yeah this morning I was thinking that there would be some real advantages to structuring it very much like your CVR. That way the test pattern could be the test vote as well, at least for E S & S data and it wouldn't take much to convert it to other vendor formats.

A few countif macros would make it pretty easy to keep straight.

On Fri, May 4, 2018, 12:53 PM Deutsch, Herb hdeutsch@essvote.com wrote:

I see how your preserved the original format. I too have mixed emotions. The RCV format I used seems much simpler and it's easier to follow from 1 round to the next. It sort of is based on the Excel format that we export. I certainly can add missing votes, overvotes and duplicate votes. Probably will need more ballots to do that (maybe 20). I'll also have to think more about this.

In the meantime I've added a third tab to the original spread sheet to show Open Primary with and without a Party Preference contest. I moved the example list to the top for both straight party as well as this new one. I tried to show a normal ballot with different party votes with and without the Party Preference (PP) contest to show that it's presence or absence is not significant UNLESS there is a crossover. I then show its presence with different voting patterns (valid and not) in the crossover case. I think the 7 examples are sufficient to illustrate the different scenarios. Looking for agreement or disagreement.

From: George Gilbert [mailto:george.gilbert@rankedchoicevoting.org]

Sent: Thursday, May 03, 2018 7:44 PM

To: Deutsch, Herb **Cc:** L. Massa-Lochridge **Subject:** Re: RCV Example

Am still studying yours but thought I would share what I did. I do like showing the transfers. I have also included a set of overvote options.

I preserved the basic format of your original tables, which may have some merit. I'm not wedded to it. See what you think and I will give your format more thought.

Gg

George Gilbert

RCV Resource Center

george.gilbert@rankedchoicevoting.org 336-906-0047

On Thu, May 3, 2018 at 5:43 PM, Deutsch, Herb <hdeutsch@essvote.com> wrote:

		Rou	nd 1			Rou	nd 2			Rou	nd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	А	В	С	D	А	В	С	D	А	В	С	D
4	А	С	В	D	А	С	В	D	А	С	В	D
6	А	С	В	D	А	С	В	D	Α	С	В	D

10	Α	В	С	С	Α	В	С	С	Α	В	С	С
2	В	Α	D	С	В	А	D	С	В	А	D	С
5	В	С	А	D	В	С	А	D	В	С	А	D
7	В	A	С	D	В	А	С	D	В	А	С	D
3	С	В	А	D	С	В	А	D	В	А	D	
9	С	В	А	D	С	В	А	D	В	А	D	
8	D	В	А	С	В	Α	С		В	А	С	
Cand	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
Α	4	40%			4	40%			4	40%		
В	3	30%	1		4	40%	2		6	60%		
С	2	20%			2	20%	-2		0			
D	1	10%	-1		0				0			

Sent: Thursday, May 03, 2018 4:31 PM **To:** 'George Gilbert'; 'L. Massa-Lochridge'

Subject: RCV Example

Here's a ballot example of RCV. It shows 4 candidates, 10 ballots and 3 rounds. It doesn't have all the corner cases of unvoted choices, overvoted choices, duplicate choices, etc. But it does show the candidate that had the most votes in the 1st round losing. I've pasted the spread sheet in below as well as attached the file. I thought about sorting thing but the order would change between rounds.

Maybe sorting the 1st round by choice but then keeping the order the same would be best. Does this make sense?

		Rou	ınd 1			Round 2				Rou	ınd 3	
Ballot #	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choic
1	А	В	С	D	А	В	С	D	А	В	С	D
2	В	A	D	С								

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