# CandidateChoice

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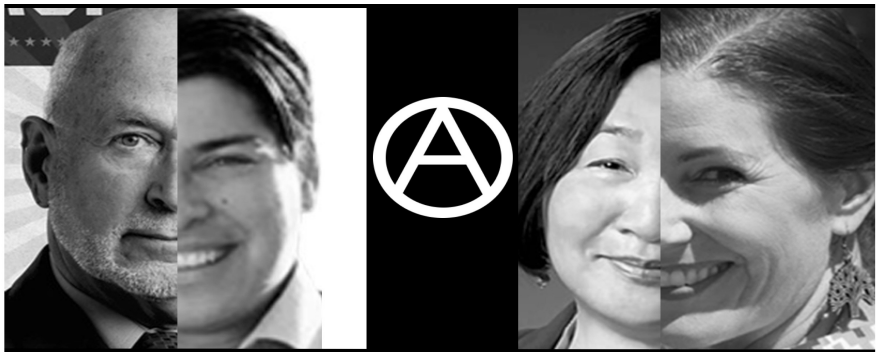
d3.oakland.meetup('20141111')

- *Visualizing*
- User integration of varying opinions
- in Ranked Choice Voting (RCV)
- For Oakland's mayor (Nov'14)

# Oakland Mayoral Race 2014



- eastWest@riseup.net
-
- EastBayCitizen:
  - *“Six Bay Area news outlets, six different endorsements for Oakland's next mayor. The confusion among editorial boards might not be that odd. In fact, they may be taking a cue from Oakland voters. Is the problem too many good candidates or too few campaigns that are differentiating themselves from the pack?”*
- *“in Oakland we are hella-Smart! We can understand that other folks have differing opinions, and still want to work something out. RCV gives us a richer vocabulary to work with. Let’s use it!” - rikiwiki*

# Opinions

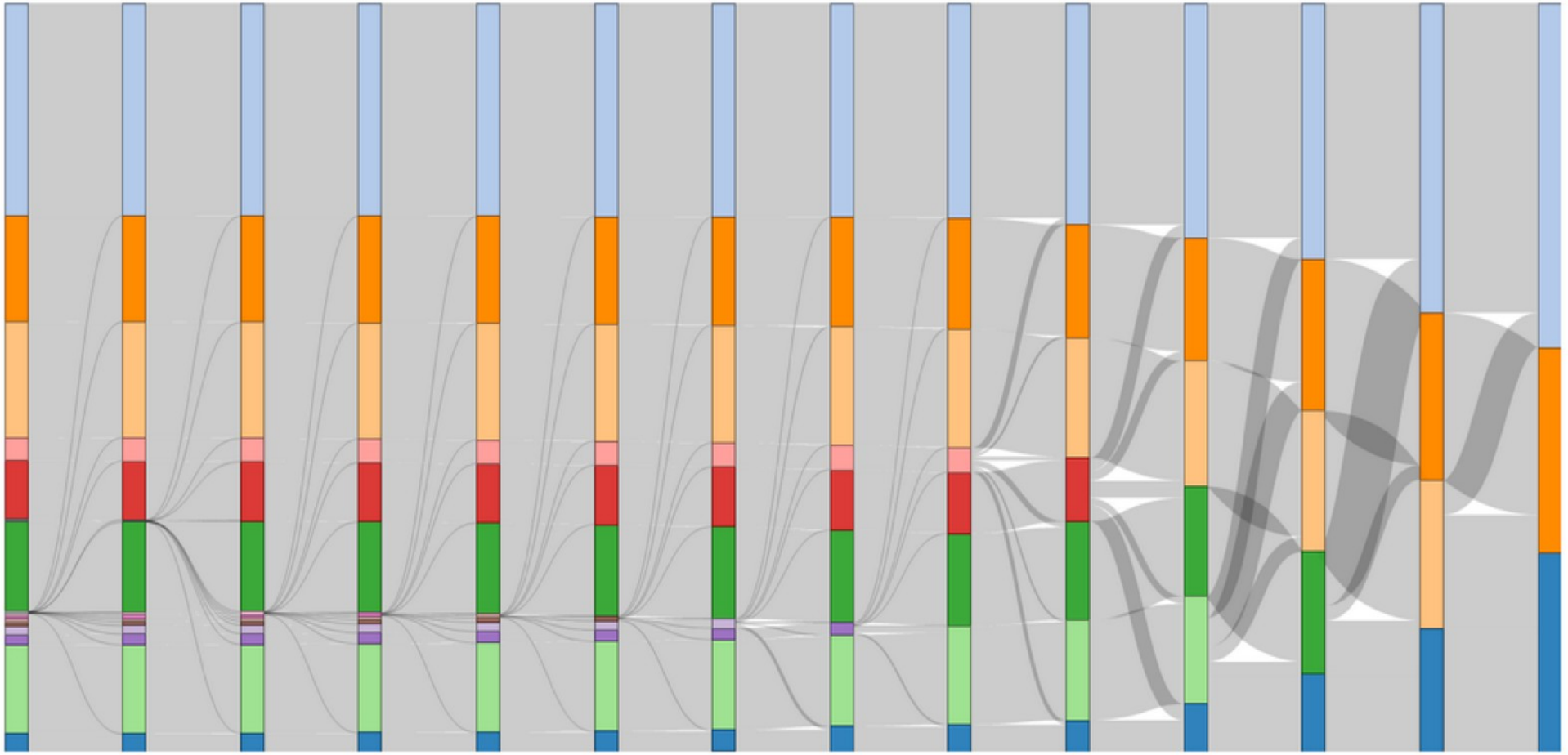
- Rankings of alternatives
  - With an explanation
- “Partial ordering”
- Users vary weights accorded to each source
- Place in total ordering
- Other examples
  - Hitlists!

| | |
|---|---|
| edit_OT | Tuman, Schaaf, Kaplan, Ruby |
| edit_EBE | Schaaf, Quan, Siegel, Kaplan |
| edit_SFC | Parker, Kaplan, Schaaf, Tuman, Ruby, Siegel |
| edit_SFBG | Kaplan, Siegel |
| edit_OP | Siegel |
| edit_BAR | Quan |
| poll_FM3_1 | Kaplan, Schaaf, Siegel, Quan, Tuman, Ruby, Parker |
| poll_FM3_2 | Kaplan, Quan, Schaaf, Tuman, Siegel, Parker, Anderson, Ruby, Liu, Wilson, Williams, Sidebotham, McCullough, Houston, Karamooz |
| poll_kpix | Kaplan, Schaaf, Quan, Tuman, Parker |

# Ranked Choice Voting

**Ranked-Choice Voting: Oakland Mayoral Election, 2014 (Preliminary Results as of 11/5/2014)**

(Hover your cursor and hold it still for a second to see more info)



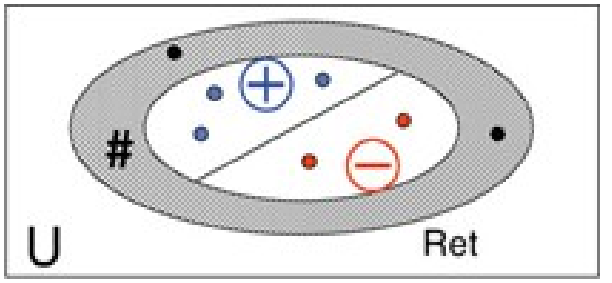
**Dave Guarino** @allafarce · Nov 6

# Theory

- Partial orders

$$O_1: A < B < C$$

$$O_2: A < D$$




- Point Alienation [Guttman'76, Kruskal77] as measure of distance between two preference rankings

$$\ominus \prec \# \prec \oplus$$

- Useful for measuring differences in ranking with preference data [BCB94]

$$J \equiv \sum_{d>d'} \frac{Rank(d) - Rank(d')}{\left|Rank(d) - Rank(d')\right|}$$

- Opinion = ***{BOT < {Rest} < Last < … < First < TOP }***

# d3 viz

- Initial graph
- User control
- Intuition: pulling beads from a basket
- ForceLayout wrapper
  - Heuristic *global* optimization of node placements given *local* constraints on edge lengths
  - Fun to watch!

# Related work

- Minneapolis 2013 RCV viz (OpenTwinCities)
- Oakland 2014 RCV (Dave Guarino)

# Conclusions

- Start with Bostock's tutorials
- Go to the code
- Pre-computation vs. live transform()?
  - Client/server trade-offs
  - (+) Better placement optimization
  - (-) Less fun to watch
- I'm a d3 newbie
  - Mobile dependencies
  - Turn it into a bl.ocks example?