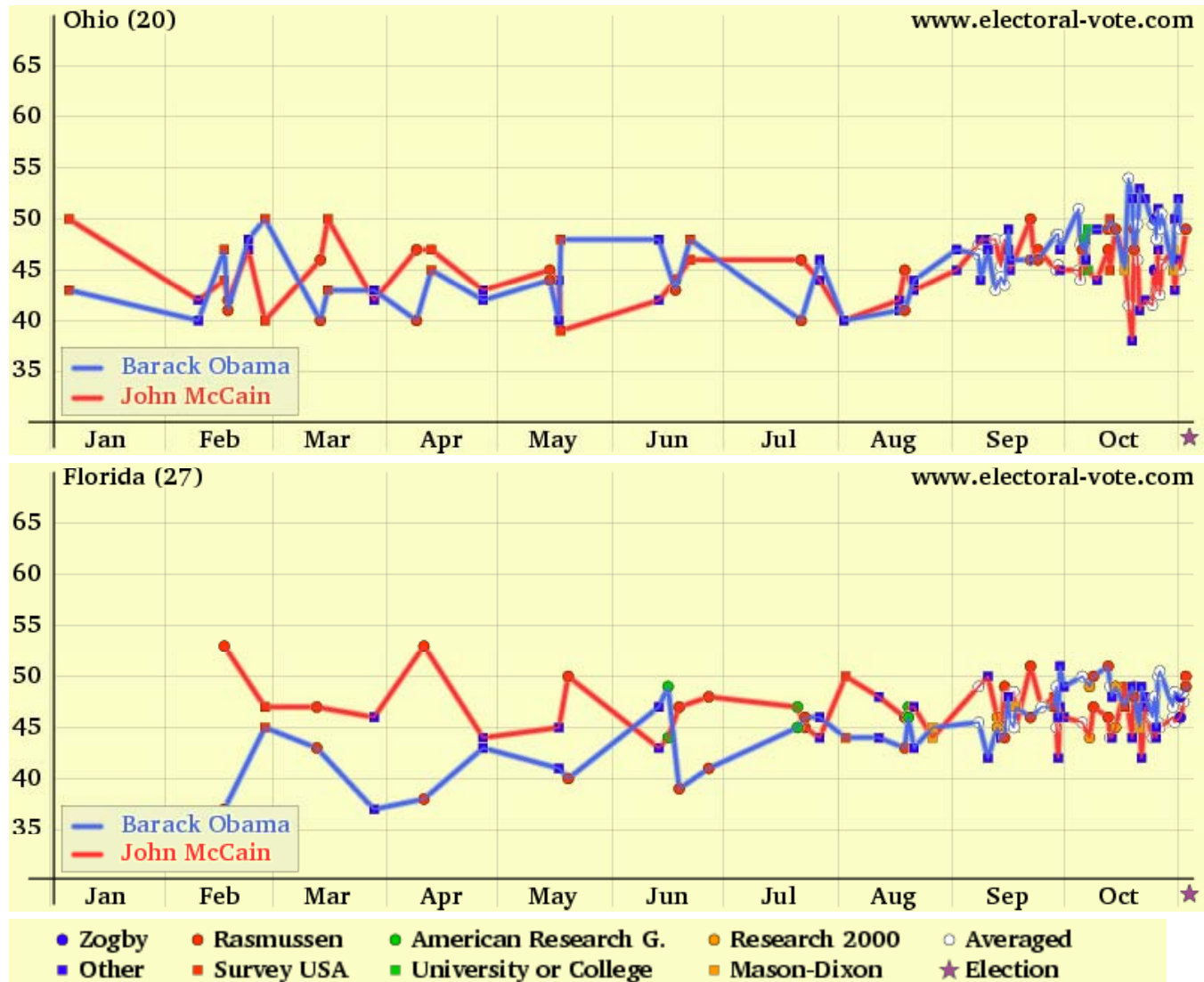


Bayes and Election Predictors

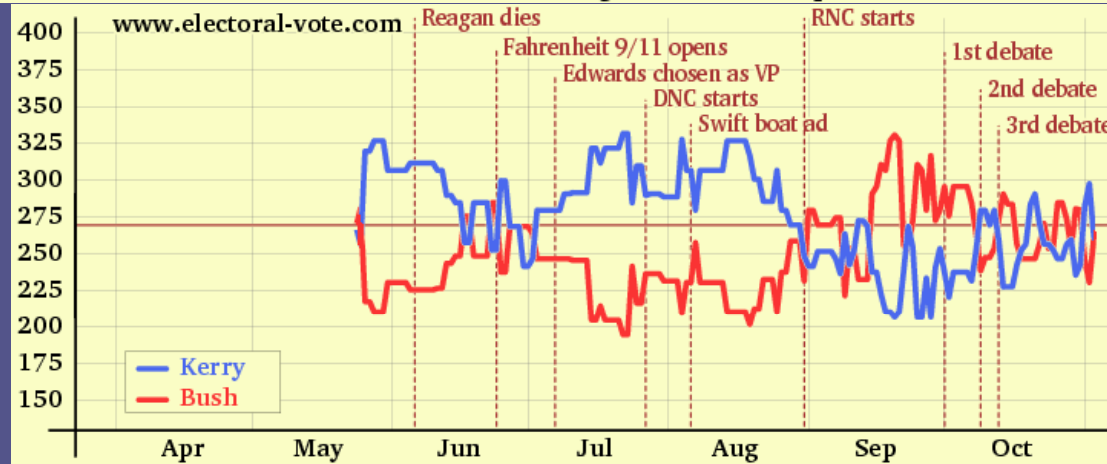
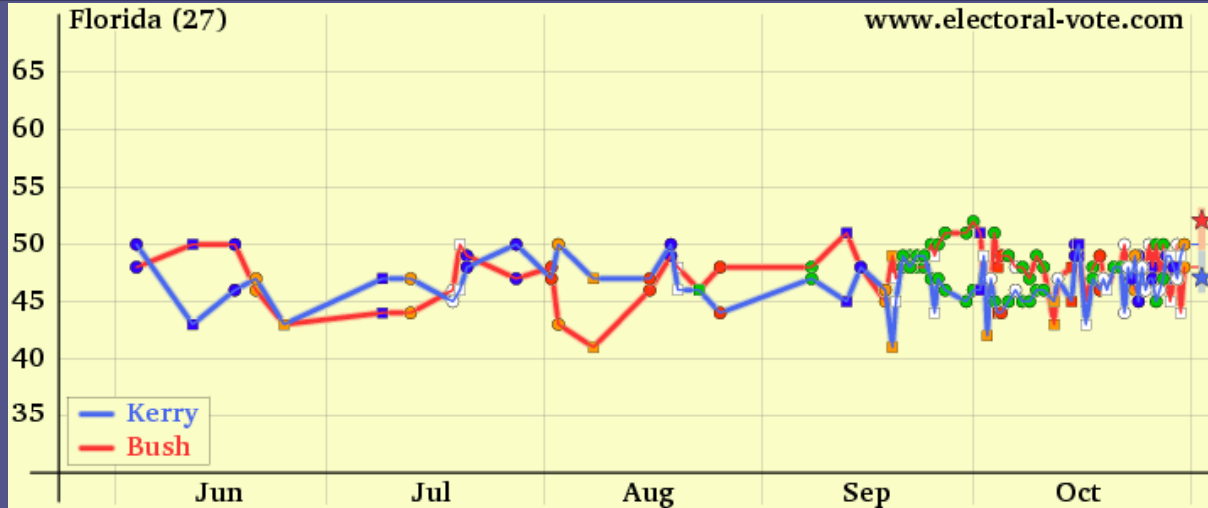
How well did we do predicting the elections using statistical methods?

Elections are tricky to predict..

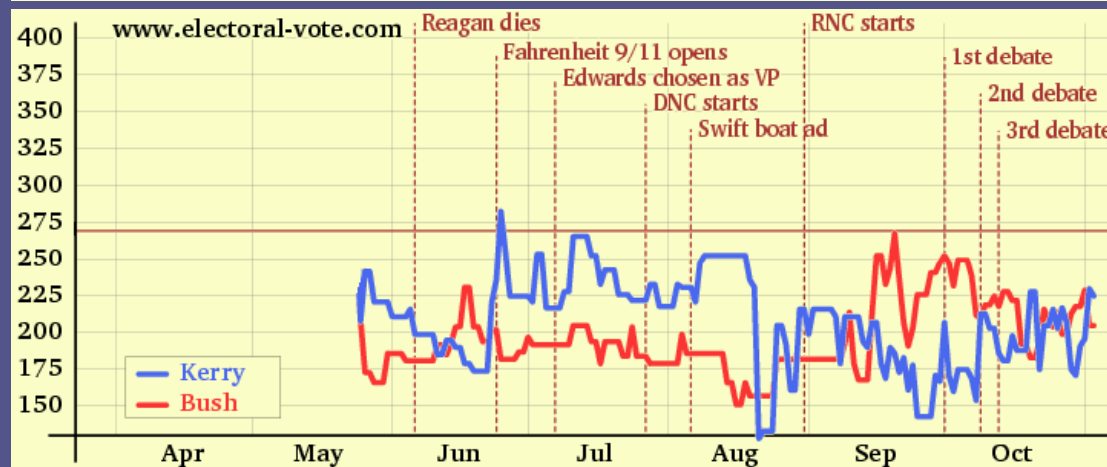
Polls from many sources are collected. Many times they disagree. Who do we listen to?



2004 - Wrong... oops



All States



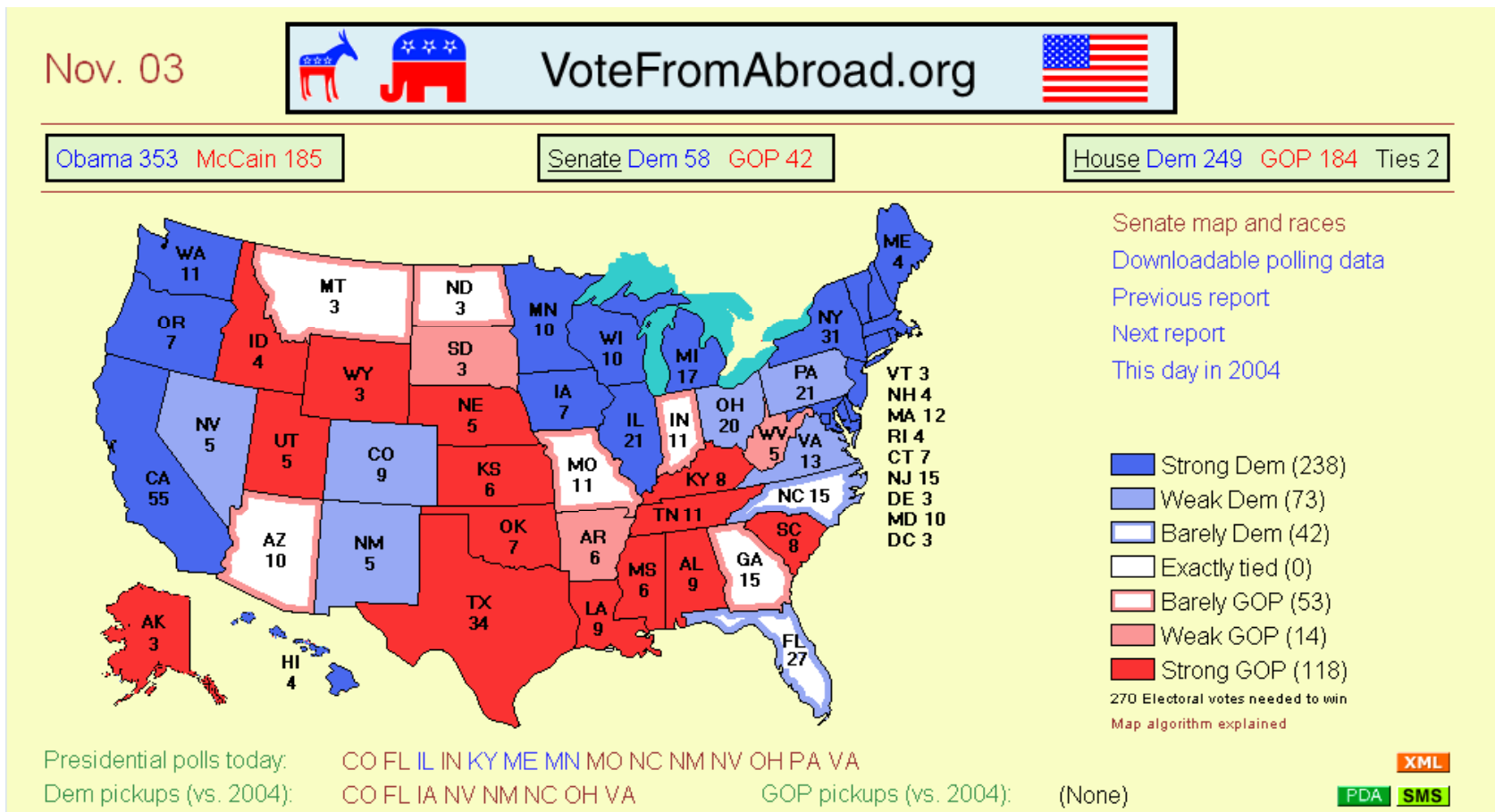
> 5% margin States



Three methods used to predict elections.

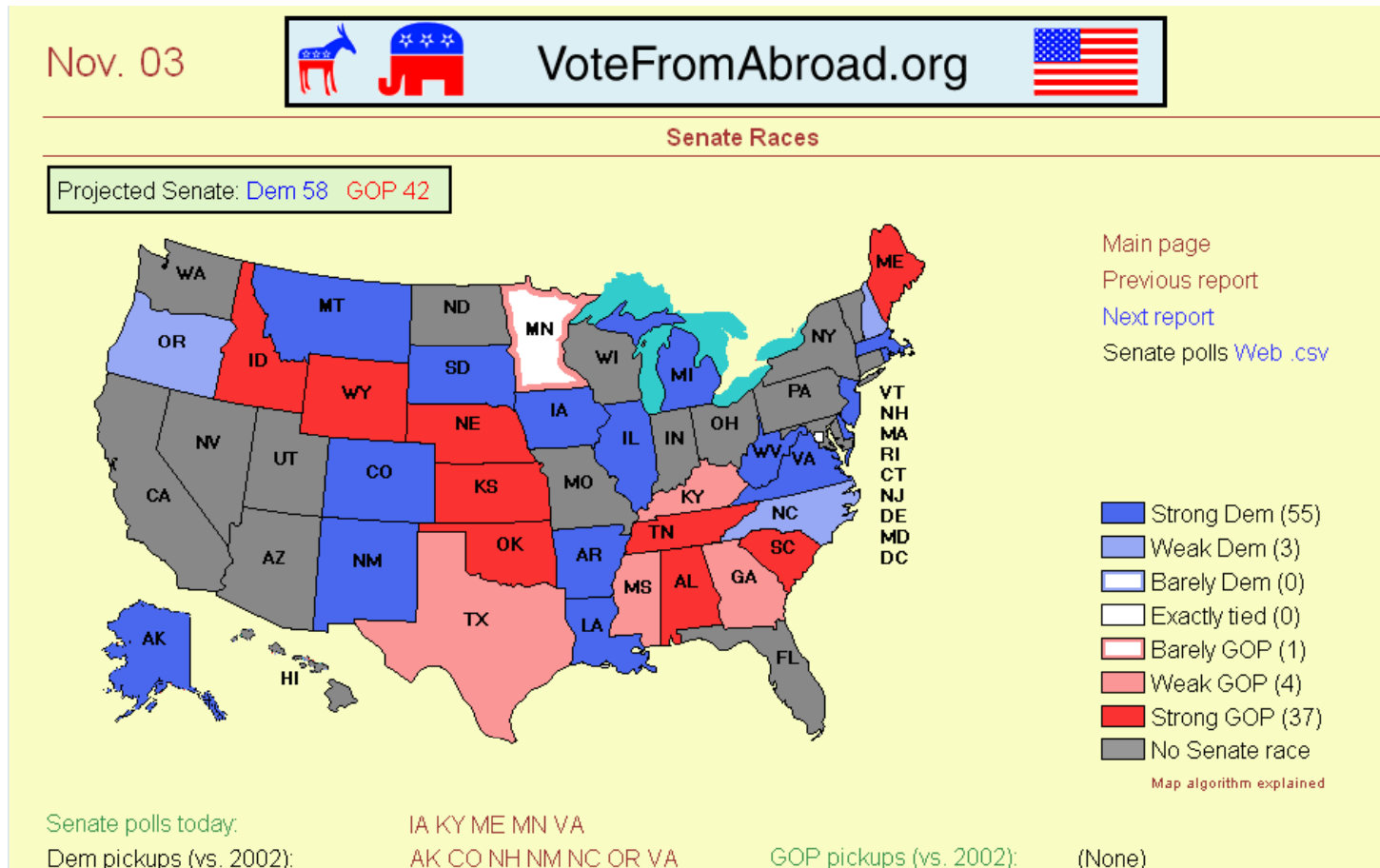
- Regression with Heuristics
 - www.electoral-vote.com
- Bayesian Nets
 - www.fivethirtyeight.com
- The Free Market
 - www.intrade.com

Prediction, Presidential Elections



Nov 3, 2008

Prediction, Senate



Nov 3, 2008



Bayesian Networks

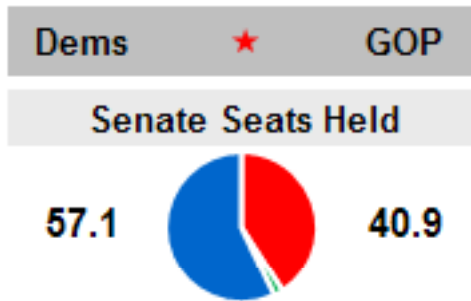
- Rate Polling agencies based on past performance.
 - This can also be done regionally.
 - Weight predictions of pollsters based on past performance.
- Include interactions. For instance, some regions seem to move together.
- Adjust models based on past success and failures



Lets go to the web

- <http://www.fivethirtyeight.com/>

Prediction, Senate



Results Omit independents, would be 59.1 to 40.9 otherwise.

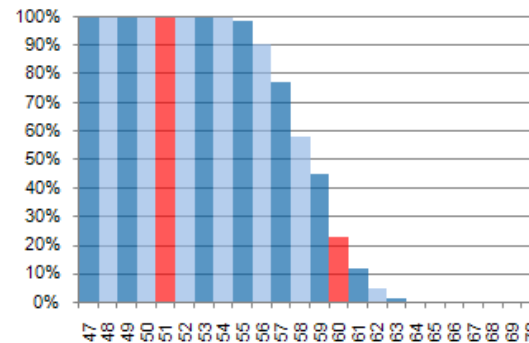
Actual results look to be 58 to 42

Nov 3, 2008

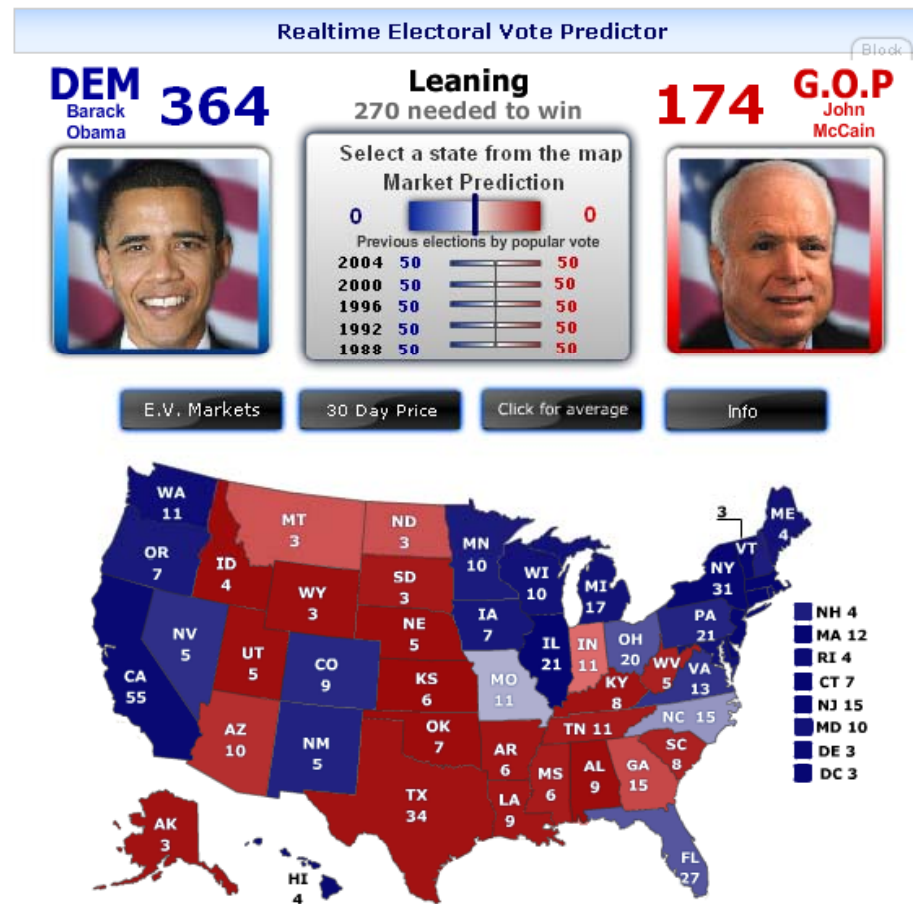
Senate Projections, 11/1

Democrats appear to be on the verge of wrapping up several more pickups of Republican-held seats -- but their odds of finishing with 60 or more seats are becoming longer.

Senate Scorecard			
Tiilts DEM		Tiilts GOP	
53%	MN Franken Coleman	(none)	
Leans DEM		Leans GOP	
78%	NC Hagan Dole	(none)	
Likely Dem		Likely GOP	
88%	OR Merkley Smith	84%	GA Martin Chambliss
Safe Dem		Safe GOP	
98%	NH Shaheen Sununu	99%	NE Kleeb Johanns
100%	AK Begich Stevens	99%	TX Noriega Cornyn
100%	CO M.Udall Schaffer	99%	ID LaRocco Risch
100%	LA Landrieu Kennedy	100%	ME Allen Collins
100%	NJ Lautenberg Zimmer	100%	SC Conley Graham
100%	AR Pryor TBD	100%	OK Rice Inhofe
100%	DE Biden O'Connell	100%	AL Figures Sessions
100%	IA Harkin C.Reed	100%	KS Slattery Roberts
100%	IL Durbin Sauerberg	100%	MS Fleming Cochran
100%	MA Kerry Beatty	100%	TN Tuke Alexander
100%	MI Levin Hoogendyk	100%	WV Rothfuss Enzi
100%	MT Baucus Kelleher	100%	WV Carter Barrasso
100%	NM T.Udall Pearce		
100%	RI Reed Tingle		
100%	SD Johnson Dykstra		
100%	VA Warner Gilmore		
100%	WV Rockefeller Wolfe		



How well did the free market do?



Nov 3, 2008

Results...

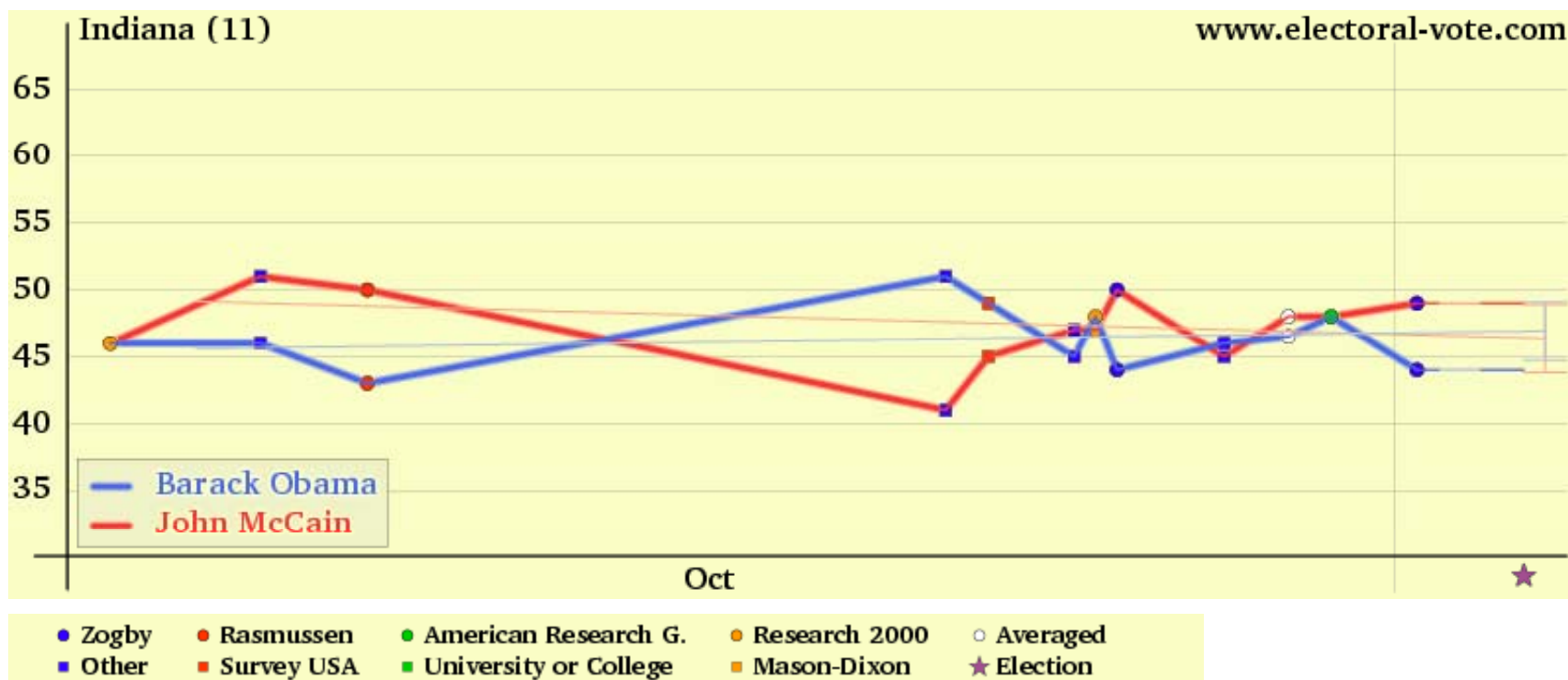
- Presidential Race

- www.fivethirtyeight.com – 48.5/50 (I count Missouri as 0.5)
- www.electoral-vote.com – 49/50
- www.intrade.com – 48/50
- No one called Indiana Correctly (not even me)

- **Senate Race**

- www.fivethirtyeight.com
 - One sort of wrong call – Minnesota
 - Looks like Minn will go to Norm Coleman by < 250 votes
- www.electoral-vote.com
 - Probably Prefect
- However, Alaska was almost predicted wrong by both.
 - Both polls predicted a blow out. However, Anchorage Mayor Mark Begich beat incumbent Ted Stevens by a squeaker (<500 votes).

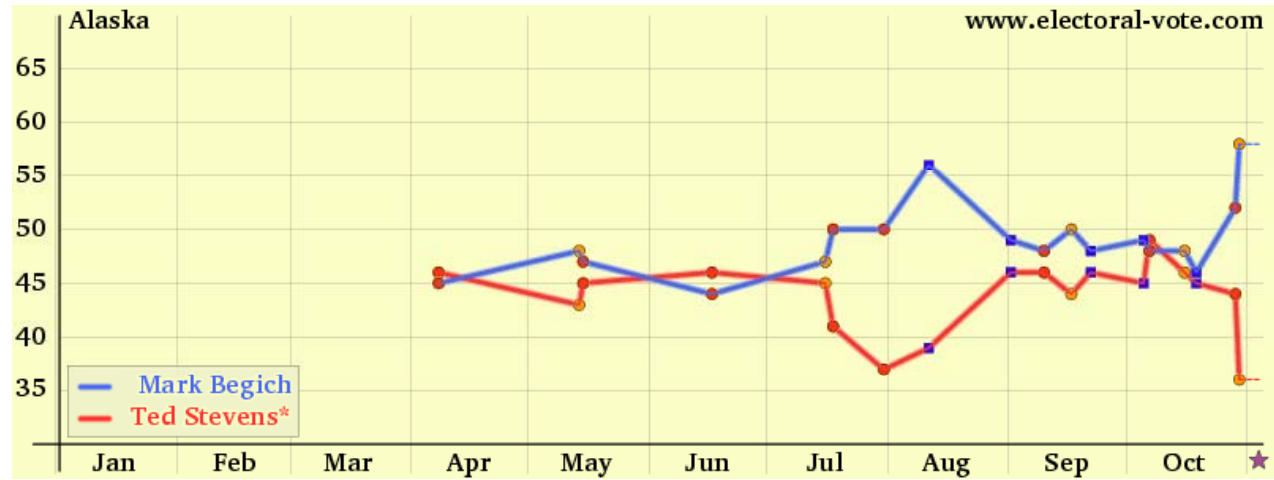
Indiana goes to Obama?? Who knew?



Weird Senate Races

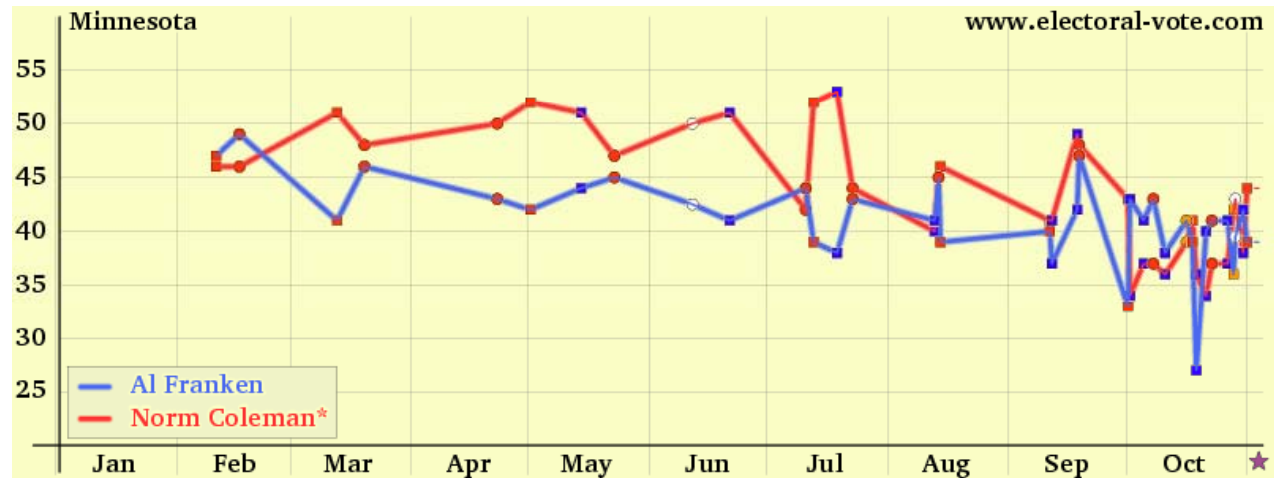
Begich v. Stevens

Begish wins by < 500 votes



Coleman v. Franken

Coleman is ahead going into a recount



- Zogby
- Rasmussen
- American Research G.
- Research 2000
- Averaged
- Other
- Survey USA
- University or College
- Mason-Dixon
- ★ Election

Lessons?

- It's hard to draw conclusions from one election.
- Both probabilistic models did very well
- [electoral-vote.com](#) uses a simpler method, if it continues to do as well as [fivethirtyeight.com](#) then it may be the better predictor.
- However, [fivethirtyeight.com](#) gave more incite into their predictions. One can base predictors on their predictions!
- The free market [intrade](#) does ok, but seemed to do slightly worse. It may do terrible without strong meta polls for traders to base decisions on.
- In four years we'll have a better picture 😊