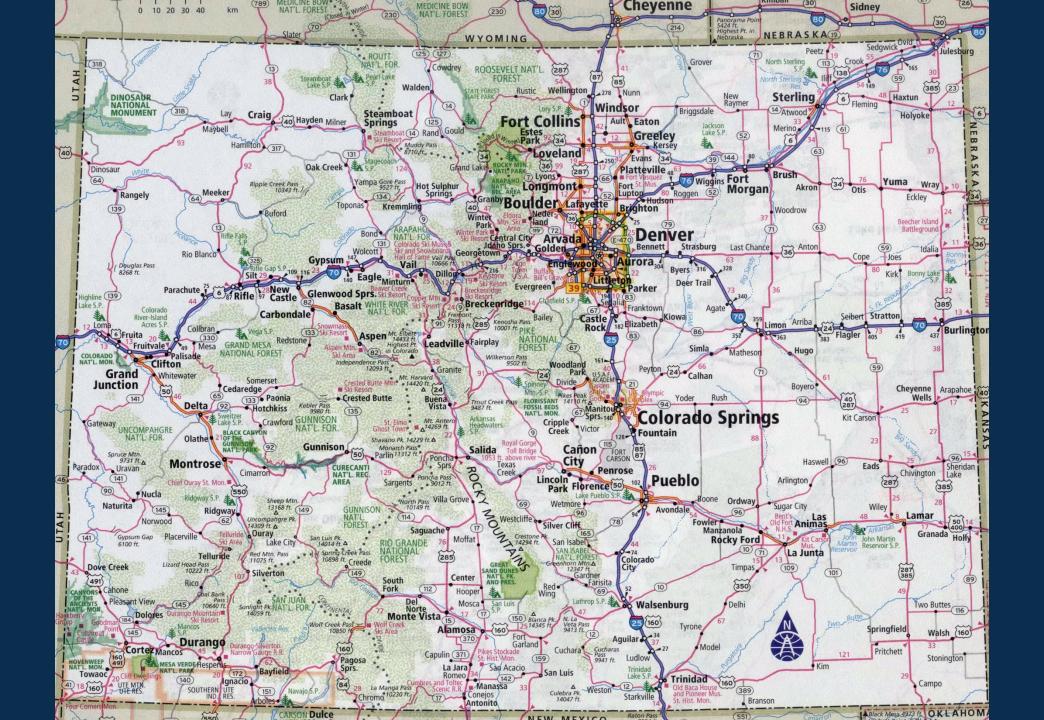


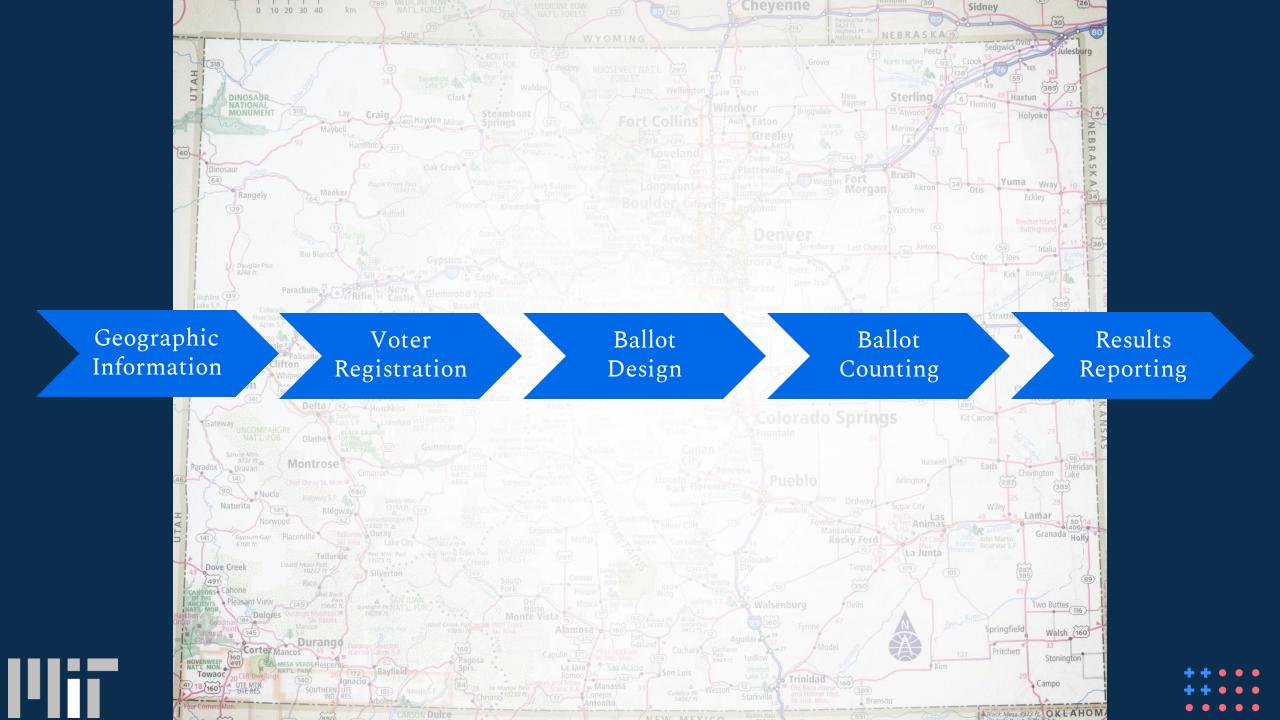
Accuracy in Elections

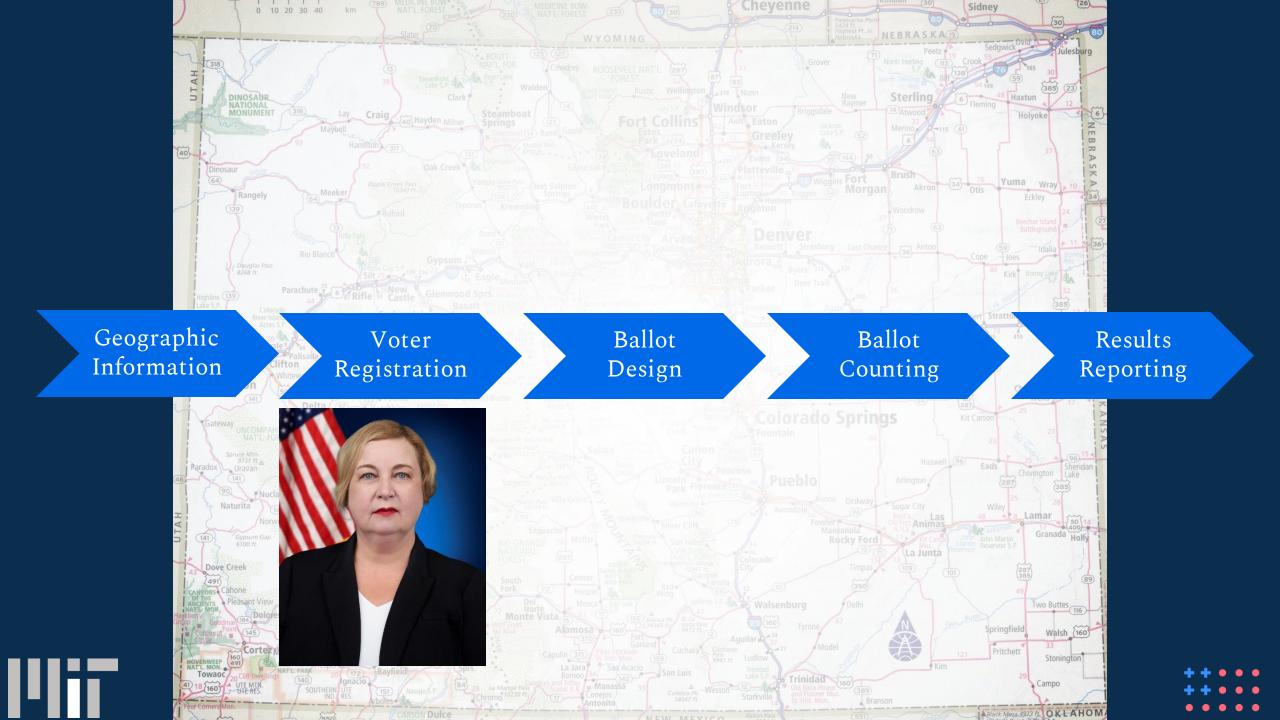
NCSL
Strong Elections, Strong States
Denver Colorado
May 20, 2023

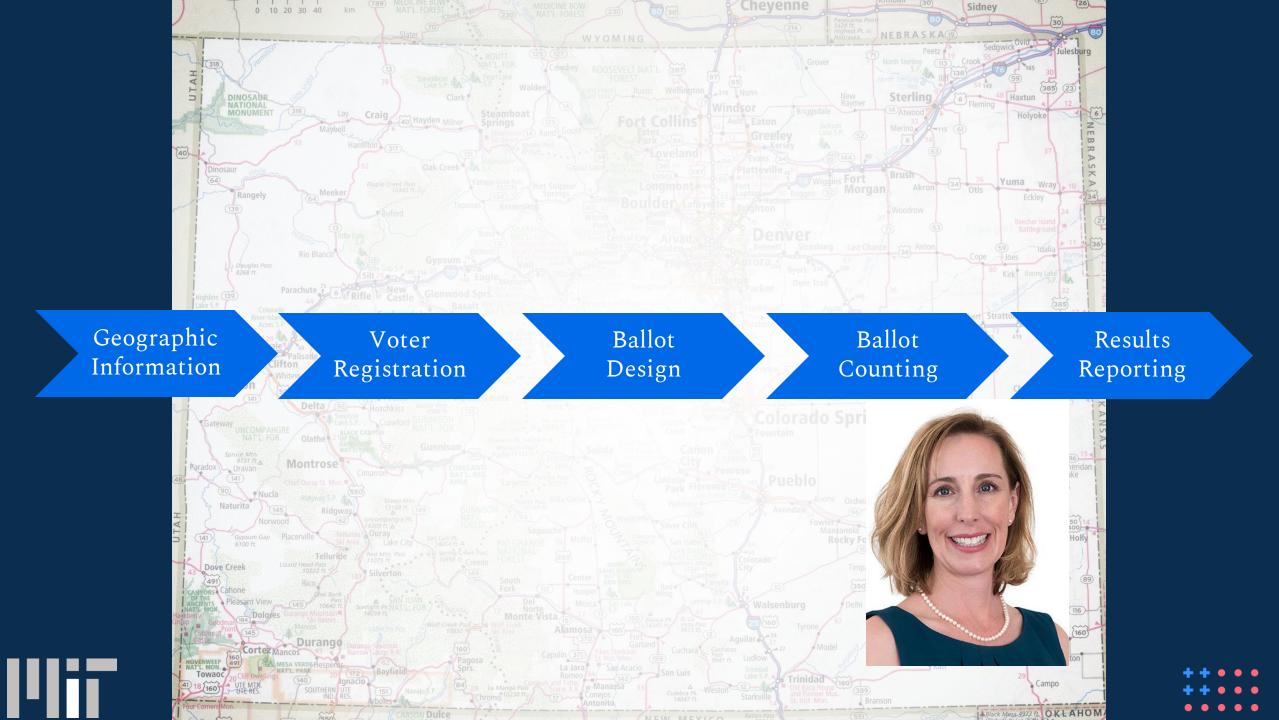


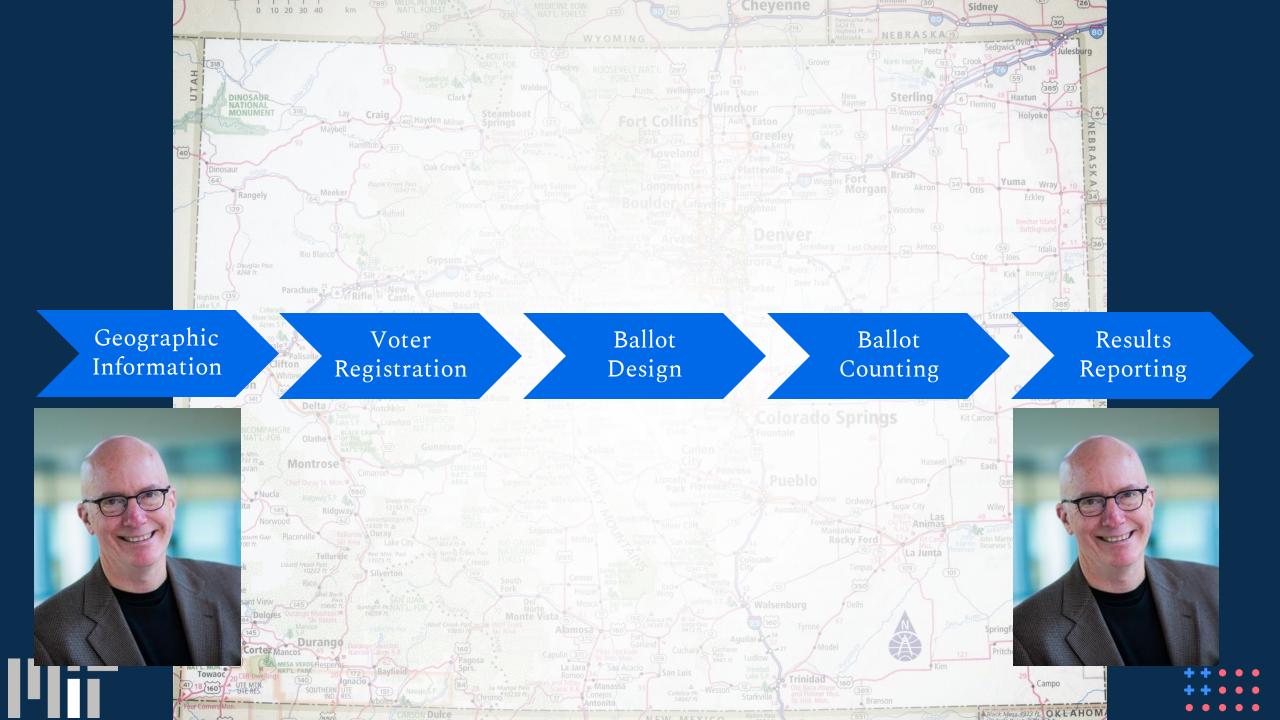




















Cheyenne



Voter Registration

Ballot Design

Ballot Counting

Results Reporting



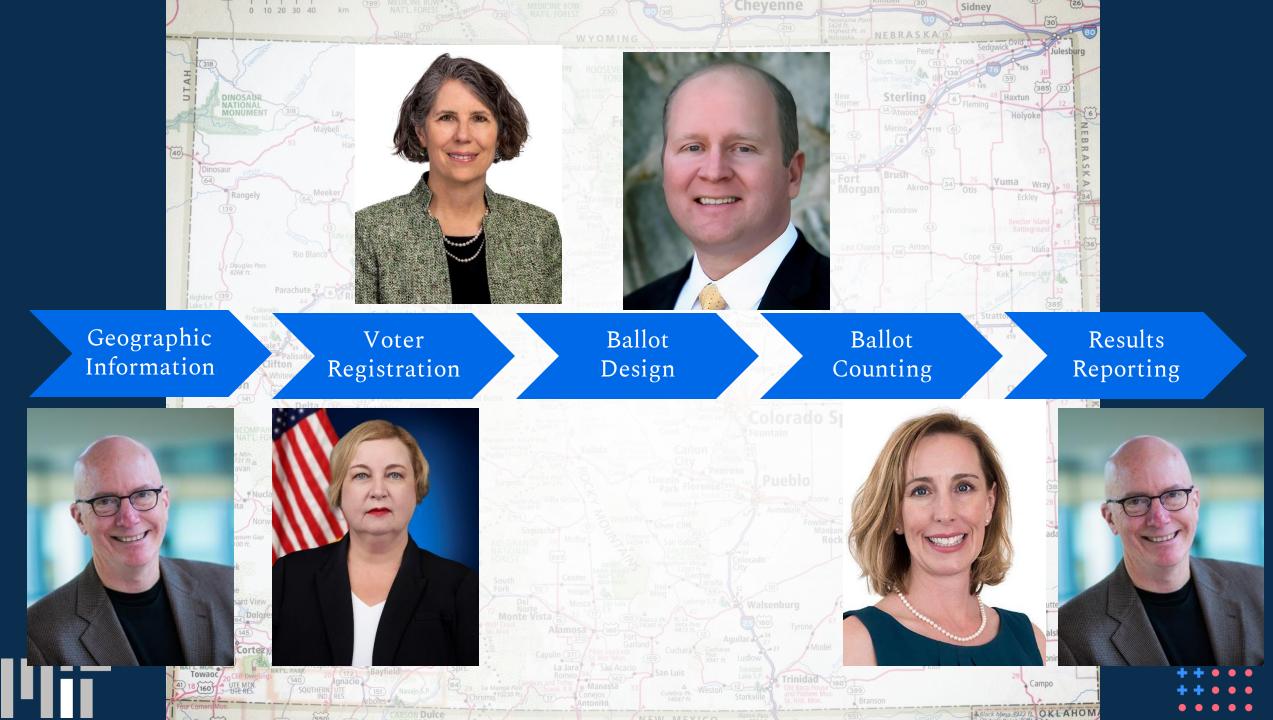








Black Mesa 4923 ft. OKLAHOMA





Kenan Sahin Distinguished Professor of Political Science







Kenan Sahin Distinguished Professor of Political Science

Co-Director, Caltech/MIT Voting Technology Project







Kenan Sahin Distinguished Professor of Political Science

Co-Director, MIT/Caltech Voting Technology Project







Kenan Sahin Distinguished Professor of Political Science

Co-Director, Caltech/MIT Voting Technology Project

Director, MIT Election Data and Science Lab







Caltech/MIT Voting Technology Project

Founded in November 2000

https://vote.Caltech.edu





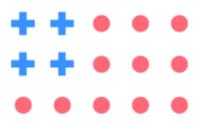


FOUNDED IN JANUARY 2017

https://elections.mit.edu







Research

Gather/disseminate election data

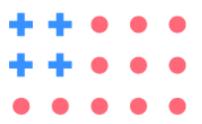
Work with election officials

Encourage official/ academic exchange

Support ESRA

- Election-night reporting
- Survey of the Performance of American Elections
- Elections Performance Index
- Trust in elections
- Social media and election officials
- Post-election audits—accuracy and attitudes
- Attitudes toward election spending
- Polling place placement
- Line length
- Vote-buying opportunities with RCV





Research

Gather/disseminate election data

Work with election officials

Encourage official/ academic exchange

Support ESRA

- Nationwide precinct returns
- Audit outcomes





Research

Gather/disseminate election data

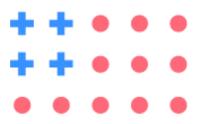
Work with election officials

Encourage official/ academic exchange

Support ESRA

- Placement of polling place
- Consequences of RCV
- Accuracy of signature verification
- Effects of automatic voter registration
- Accuracy of voter lists





Research

Gather/disseminate election data

Work with election officials

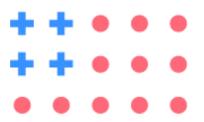
Encourage official/ academic exchange

Support ESRA

EXPERTS

MEDSL encourages and disseminates the work of leading academic authorities in election science. Search for experts in any branch of election research by location and research area.





Research

Gather/disseminate election data

Work with election officials

Encourage official/ academic exchange

Support ESRA



May 31 – June 2

https://esra-conference.org





Research

Gather/disseminate election data

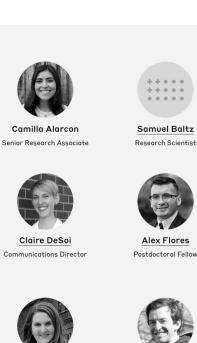
Work with election officials

Encourage official/ academic exchange

Support ESRA

Core Team Charles Stewart III Ph.D. Founding Director Monica Crane Childers Manager, Measuring Election Administration + Election Science Senior Research Associate

Jack Williams Senior Research Associate



Kate Murray

Senior Research Associate





Current Graduate Researchers











Kirsi Rajagopal

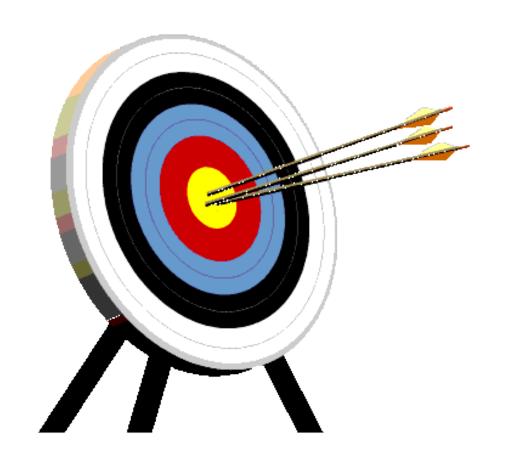
Agenda for the Rest of the Talk

- + Why accuracy matters in elections
- + Challenges to accuracy
- + Where challenges occur—before, during, and after Election Day
- + Before Election Day
 - Districting
 - Voter registration
- + During Election Day
 - Voting machines
- + After Election Day
 - Auditing
 - Election night report
- + Artificial Intelligence





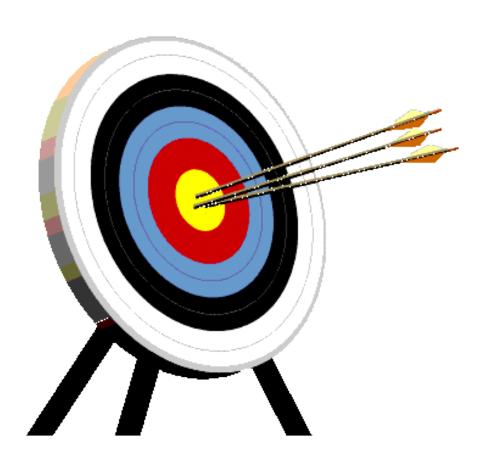
Accuracy







Accuracy

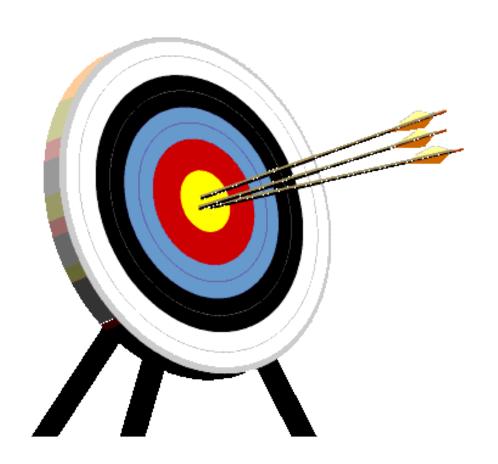


Correct outcomes





Accuracy



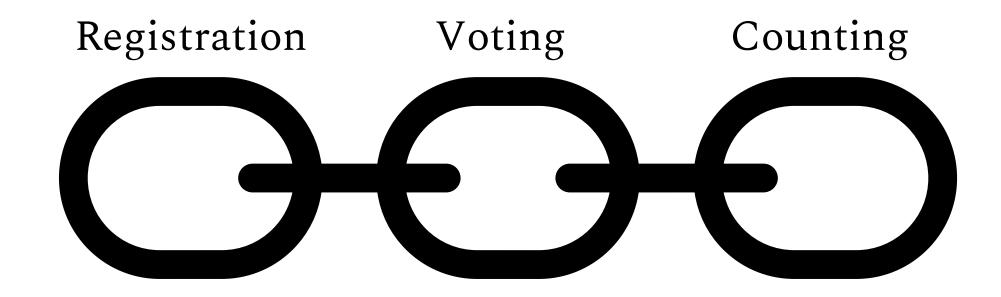
Correct outcomes

Voter trust





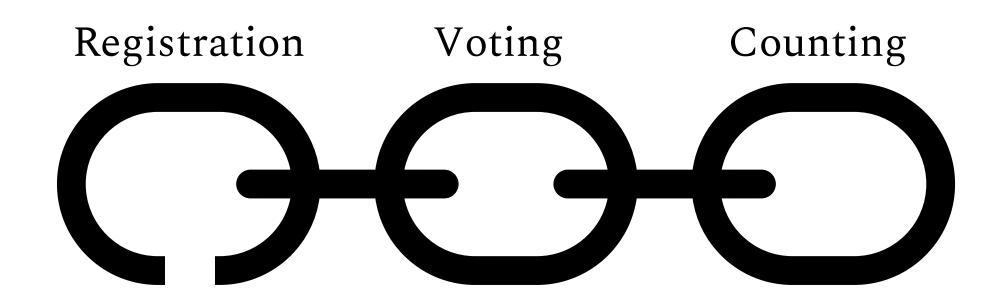
From the Voter's Perspective







From the Voter's Perspective



Lost Vote





2000 Election

4 TO 6 MILLION LOST VOTES

1.5 to 2 Million Lost Because of Faulty Equipment and Confusing Ballots

1.5 to 3 Million Lost Because of Registration Mix Ups

Up to 1 Million Lost Because of Polling Place Operations

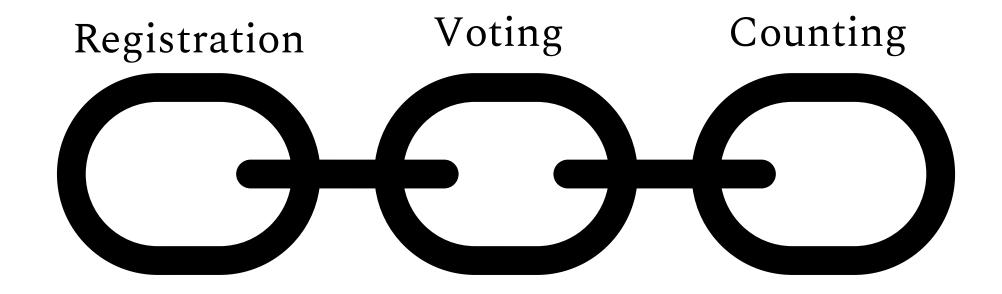
Unknown Losses Because of Absentee Ballot Problems

Source: Caltech/MIT Voting Technology Project, Voting: What Is/What Could Be





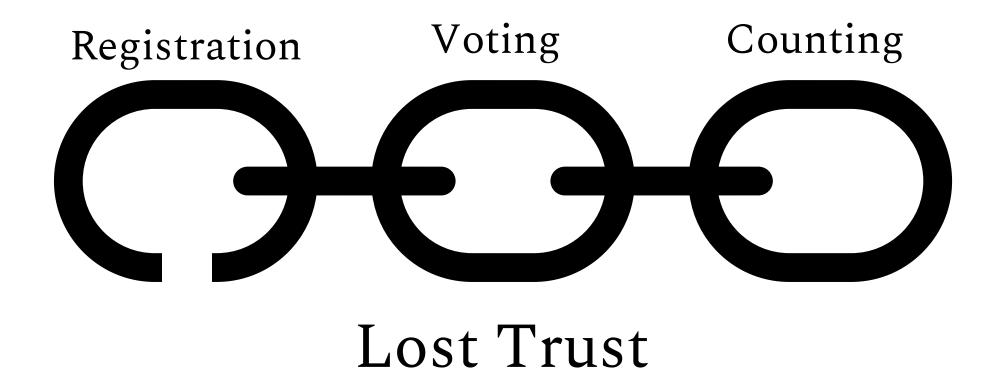
From the System's Perspective







From the System's Perspective







Registration

- Ineligible voters
- Dead voters
- Unregistered voters

Voting

- Inaccurate calibration
- Confusing ballots
- Ballot shortages
- Light ink

Counting

- Mis-programmed scanners
- Mis-programmed
 EMS systems
- Tired ballot counters





Lost Trust?

Registration

- Ineligible voters
- Dead voters
- Unregistered voters

Voting

- Inaccurate calibration
- Confusing ballots
- Ballot shortages
- Light ink

Counting

- Mis-programmed scanners
- Mis-programmed EMS systems
- Tired ballot counters













+Voters are less trusting when they personally have a bad experience.





- +Voters are less trusting when they personally have a bad experience.
- +Voters are more trusting when their candidates win.





- +Voters are less trusting when they personally have a bad experience.
- +Voters are more trusting when their candidates win.
- +Voters are more trusting when public figures they trust defend the system.

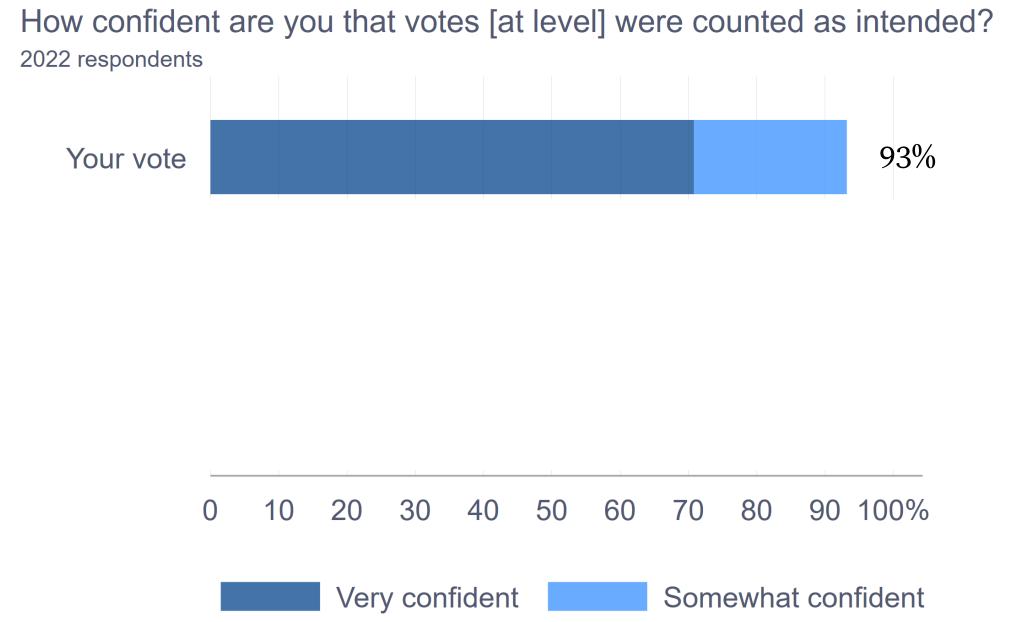




- +Voters are less trusting when they personally have a bad experience.
- +Voters are more trusting when their candidates win.
- +Voters are more trusting when public figures they trust defend the system.
- +Voters are more trusting the closer the process is to them geographically.

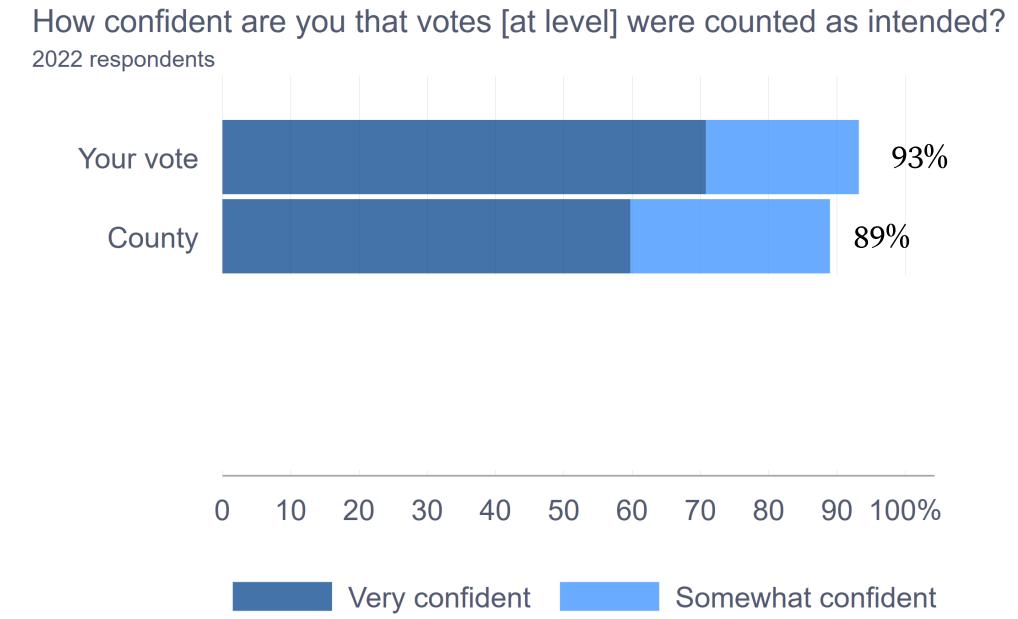






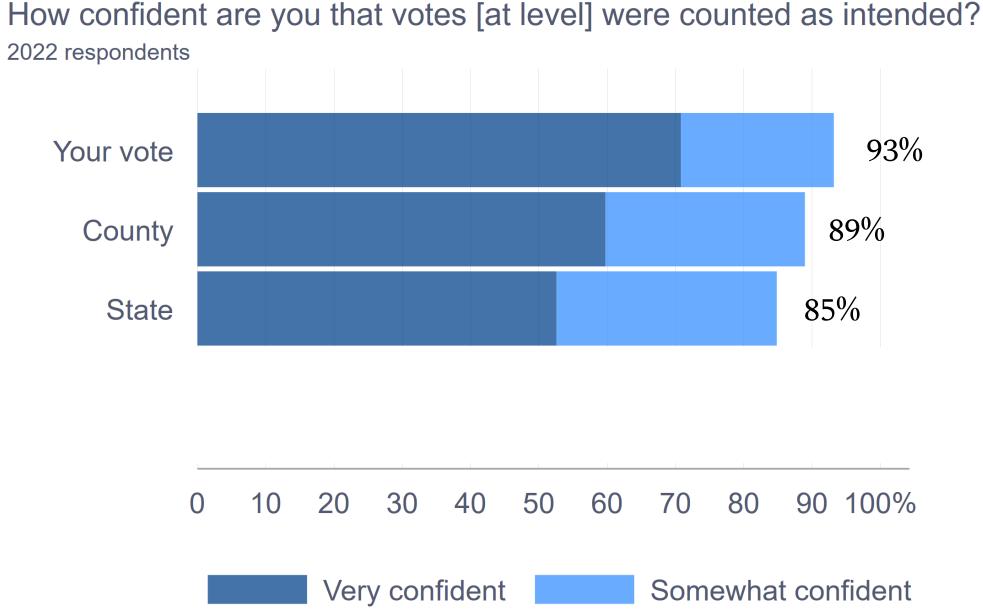








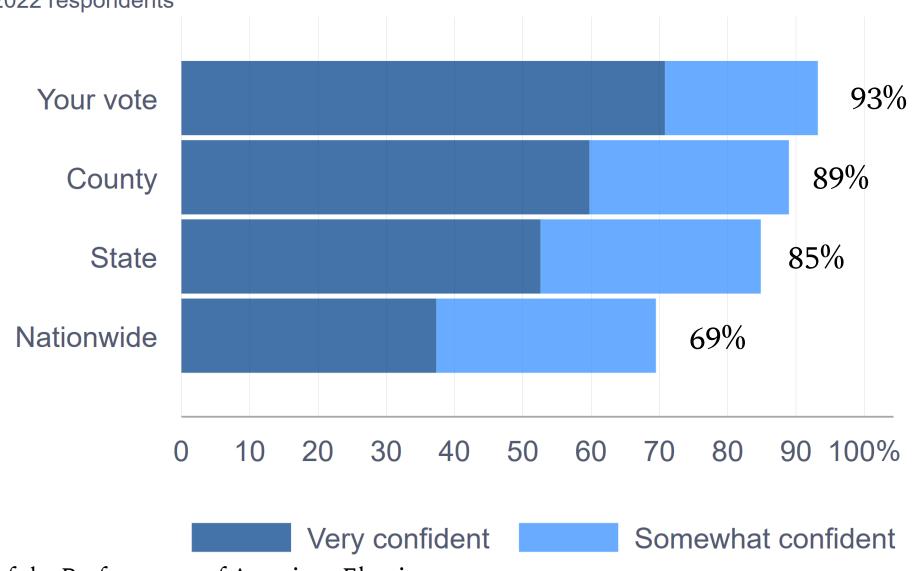








How confident are you that votes [at level] were counted as intended? 2022 respondents



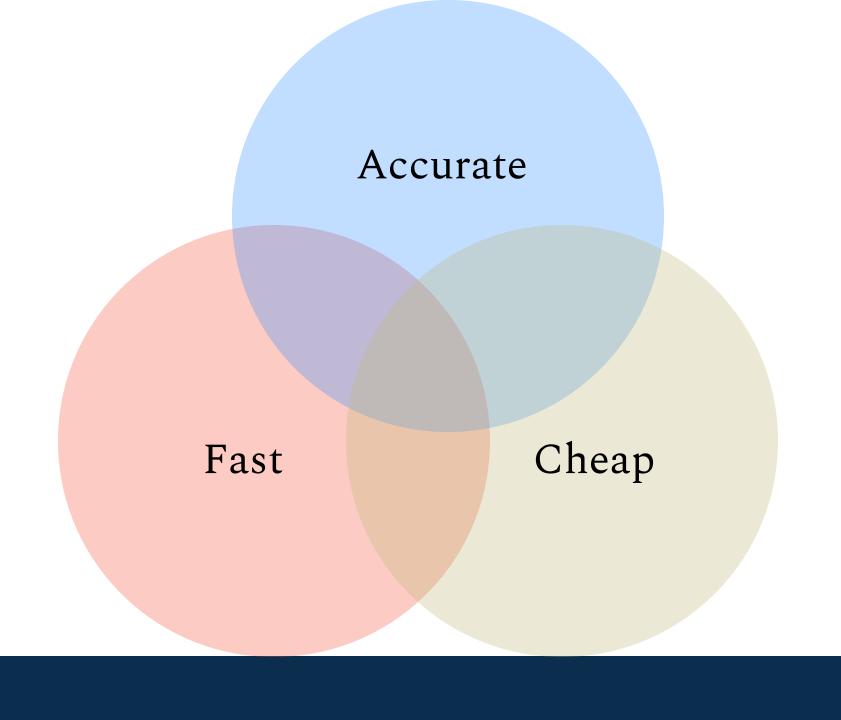




Challenges to Accuracy

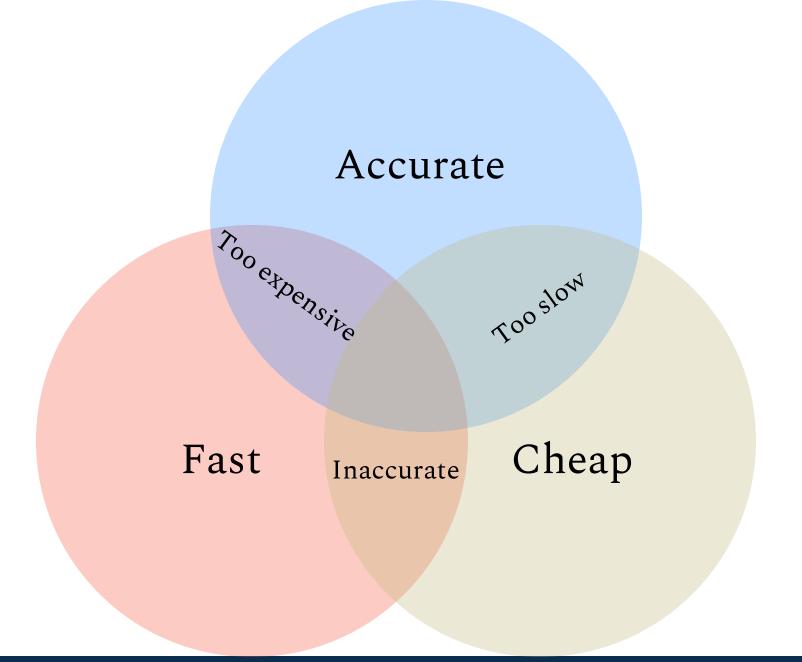






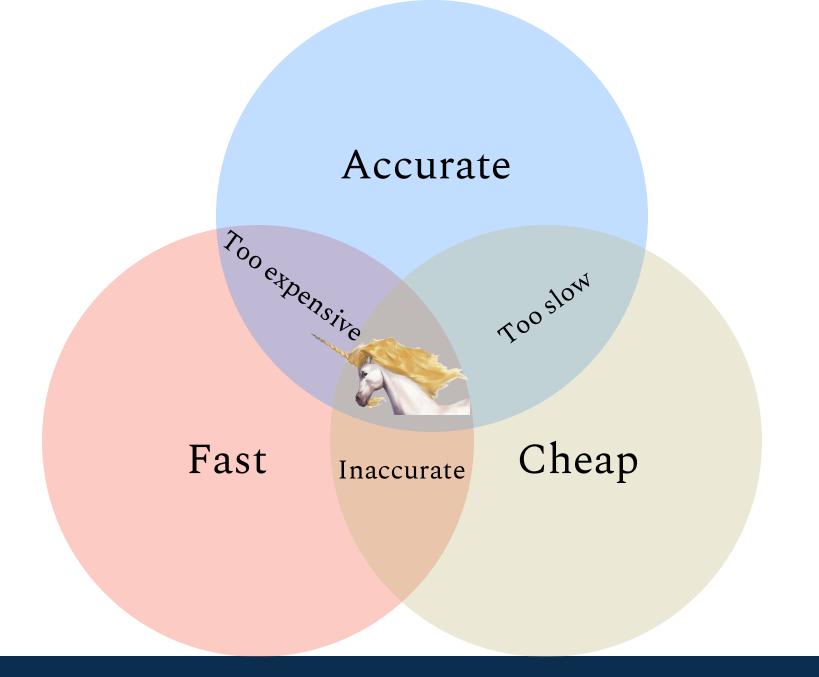


















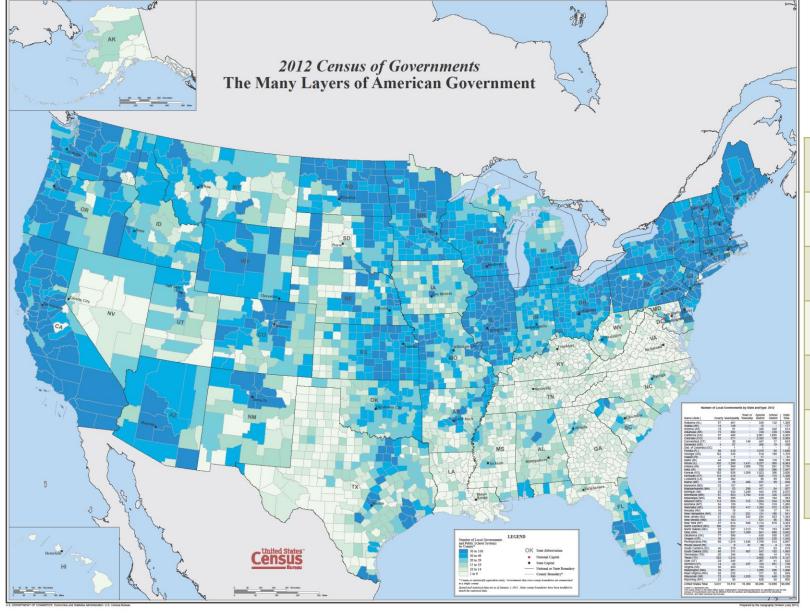












States + D.C.	51
Counties	3,031
Municipalities	19,519
Towns/townships	16,360
Special districts	38,266
School districts	12,880
Total	90,107





Jasper County, Iowa, 2020

Federal

- President & Vice President
- Senator
- House of Representatives

State

- Senator
- State Supreme Court Justice Retention (4)
- Appeals Court Judge Retention (6)
- District Court Judge Retention (6)
- Ballot Question

County

- Supervisor
- Auditor
- Sheriff
- Soil & Water Conservation Board (4)
- Agriculture Extension Council (5)

Local

Township Trustees

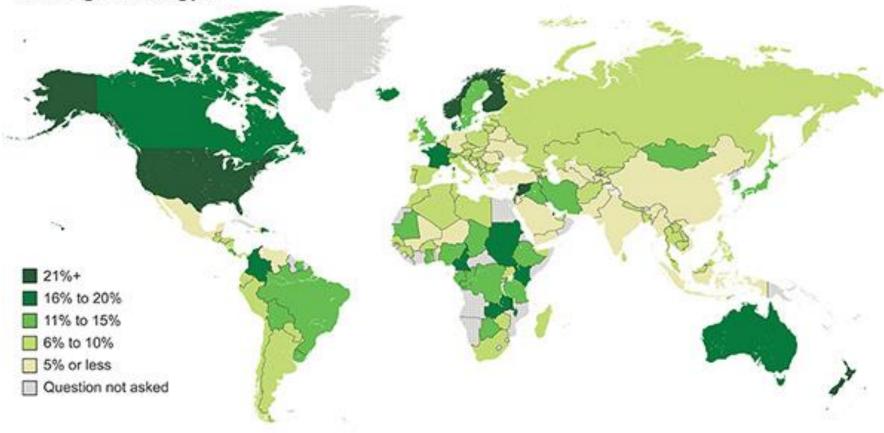
Total Choices: 34







Did you move from another city or area within this country in the past five years? Percentage answering yes



Source: https://news.gallup.com/poll/162488/381-million-adults-worldwide-migrate-within-countries.aspx?utm_source=alert&utm_medium=email&utm_campaign=syndication&utm_content=morelink&utm_term=All%20Gallup%20Headlines









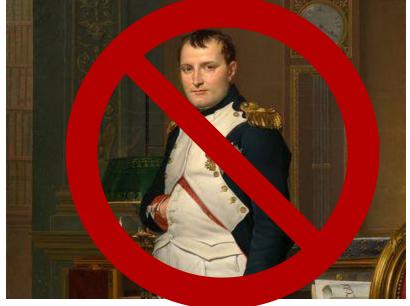








































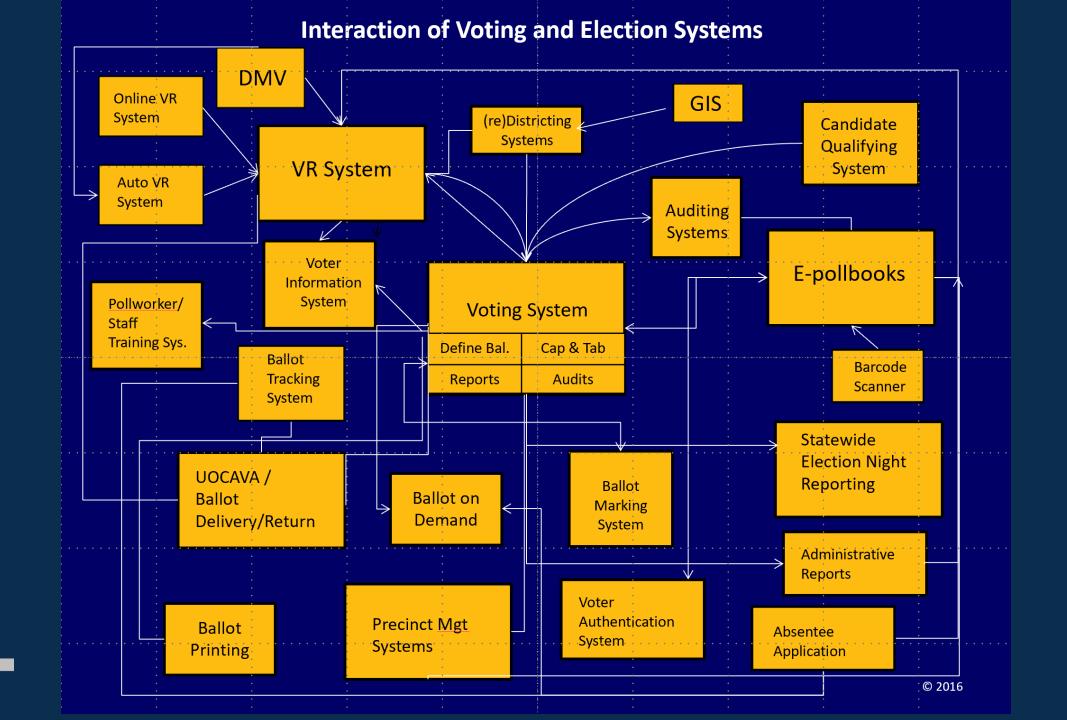




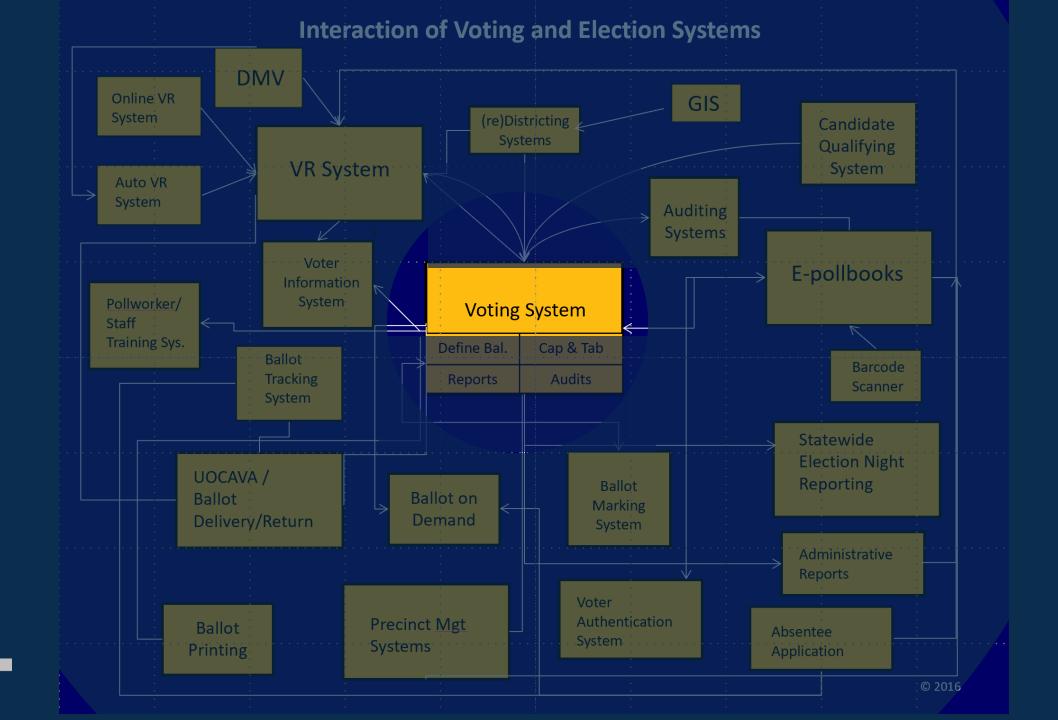
Before, During and After Election Day





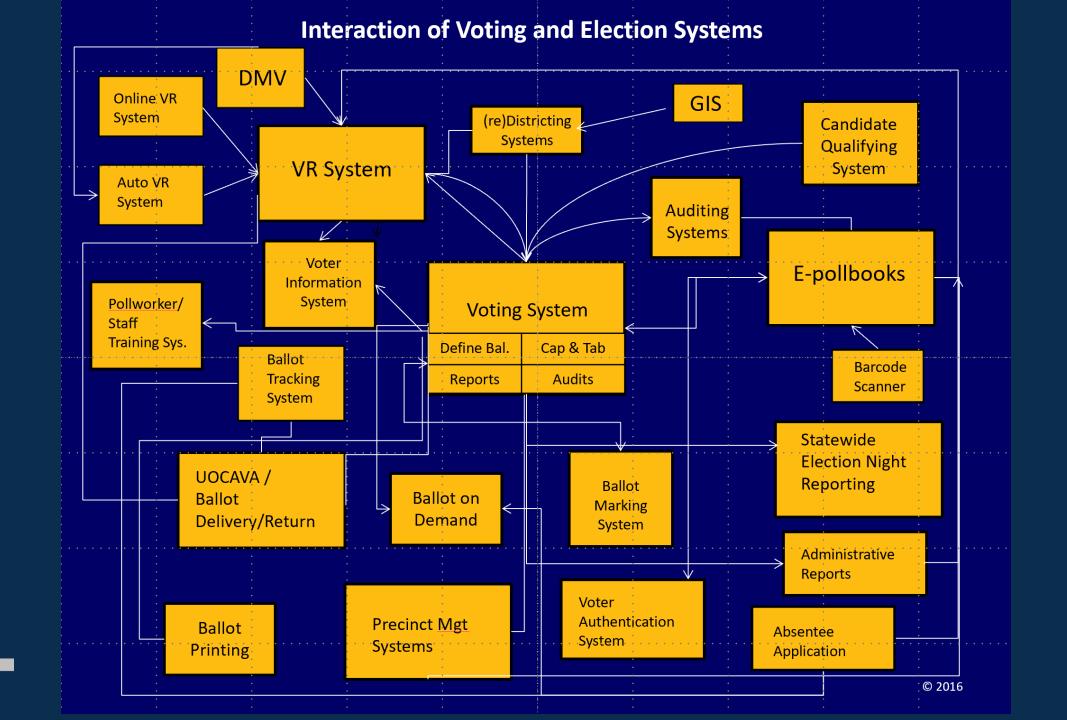




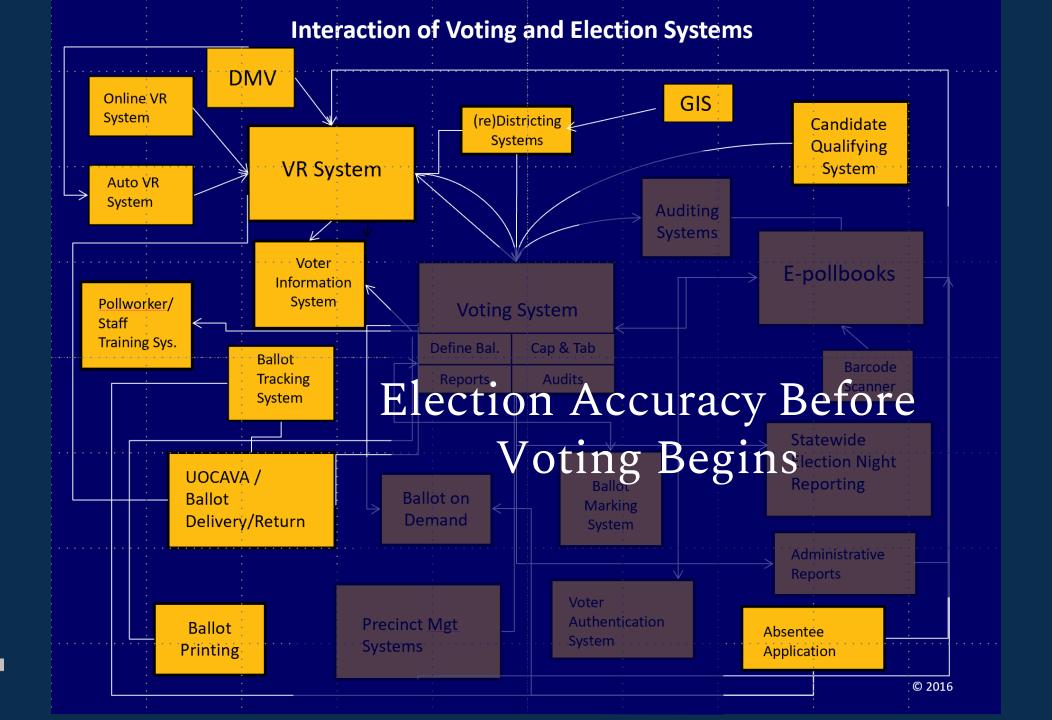








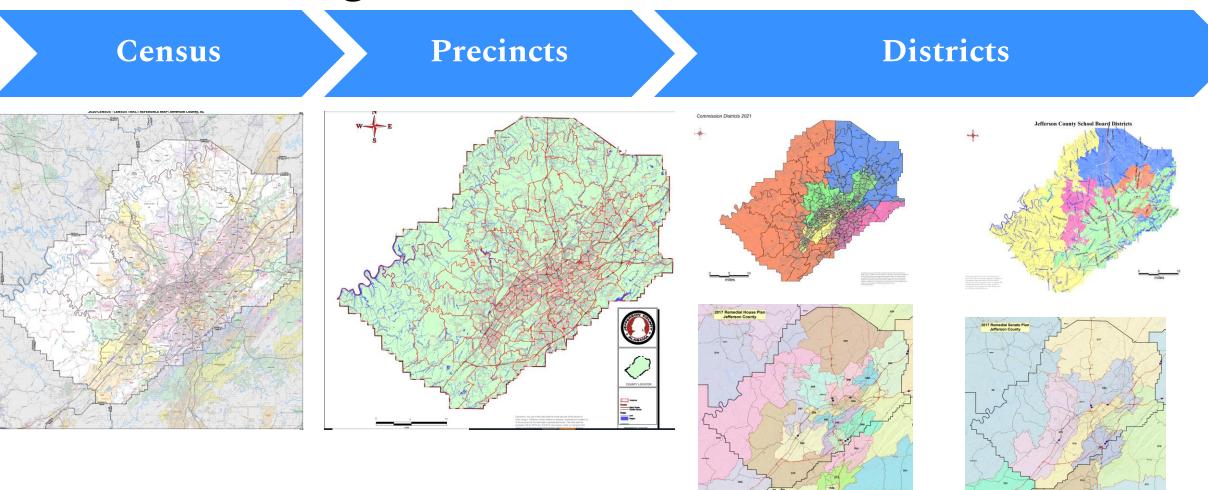








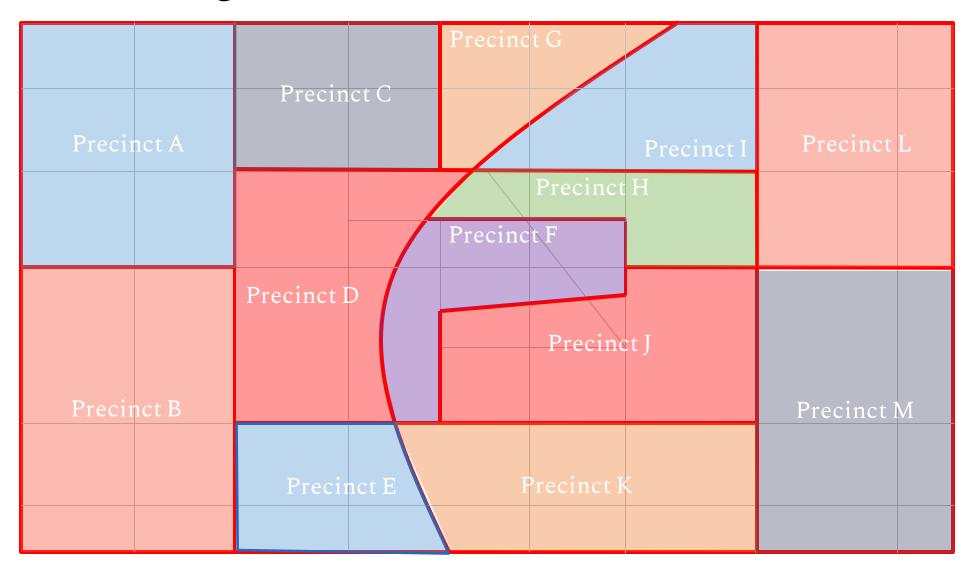
Districting







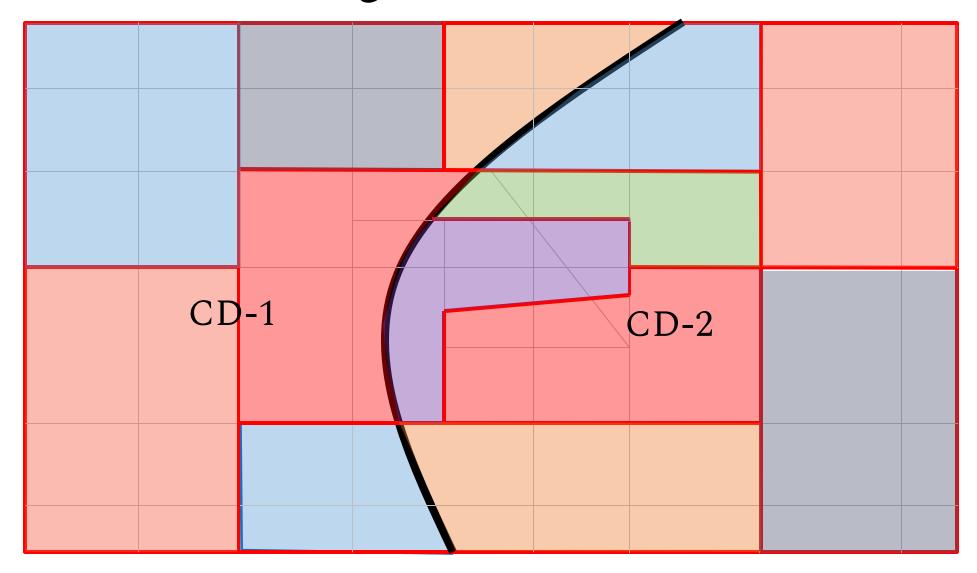
Voting Tabulation Districts (Precincts)







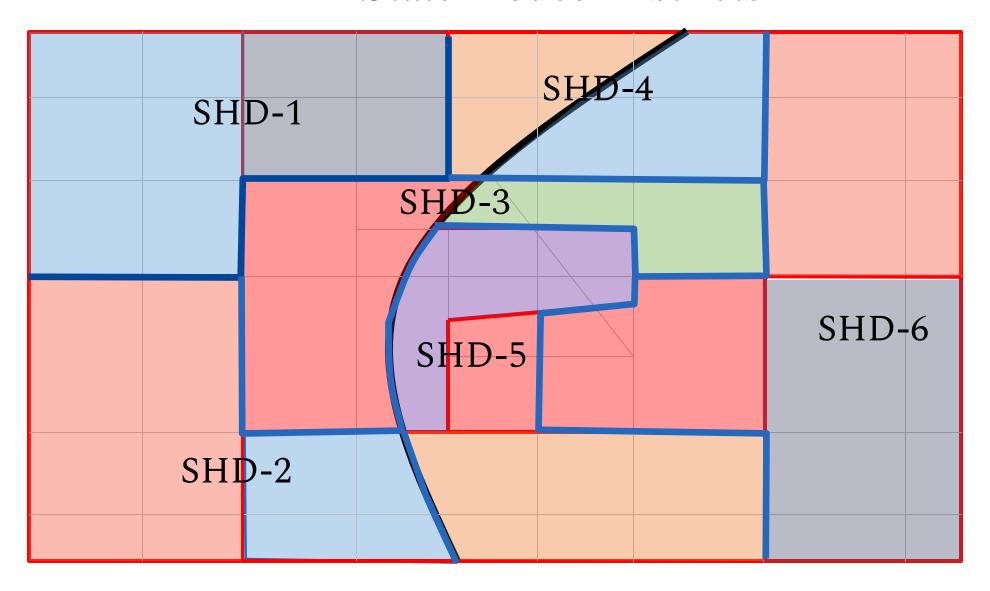
Congressional Districts







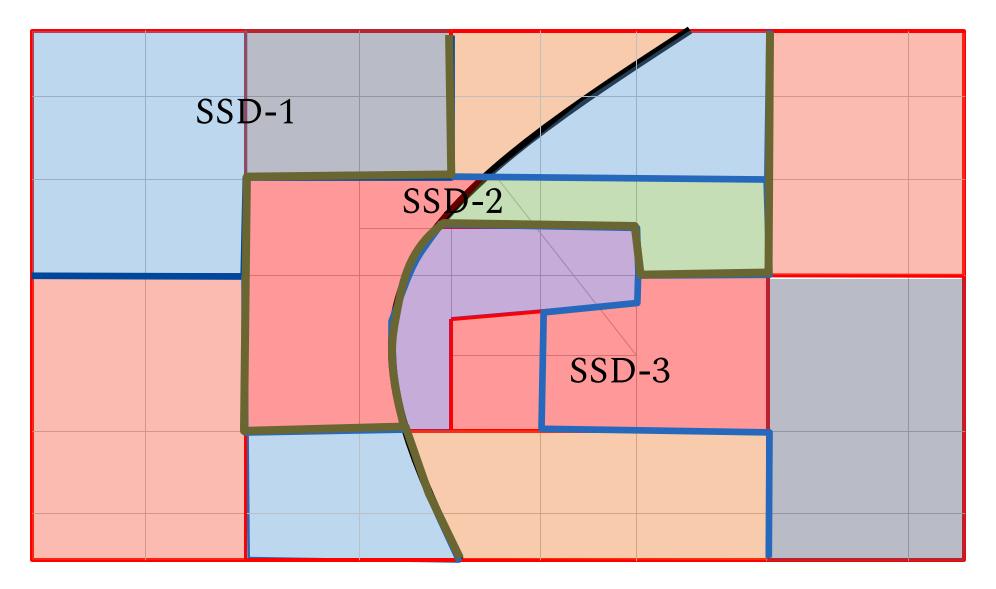
State House Districts







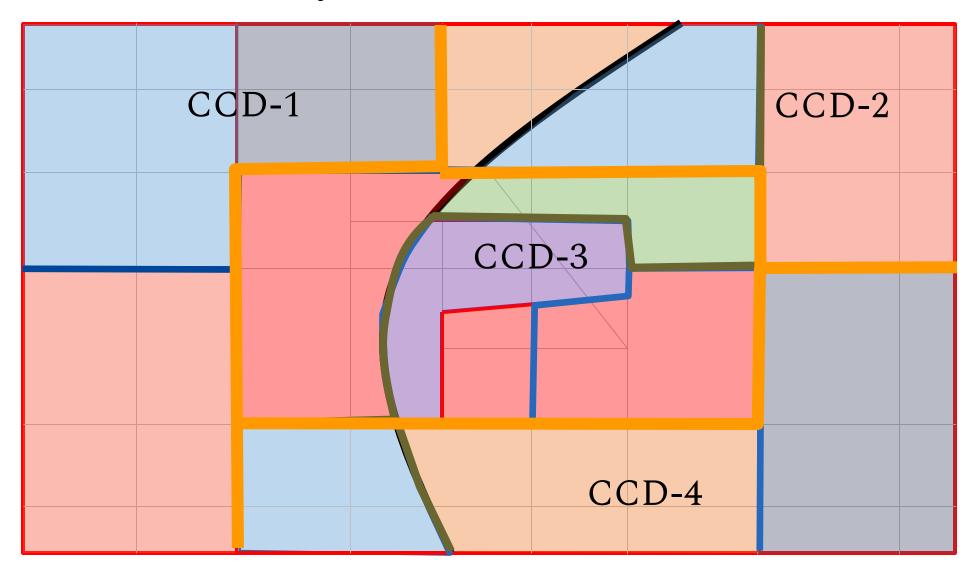
State Senate Districts







County Commission Districts





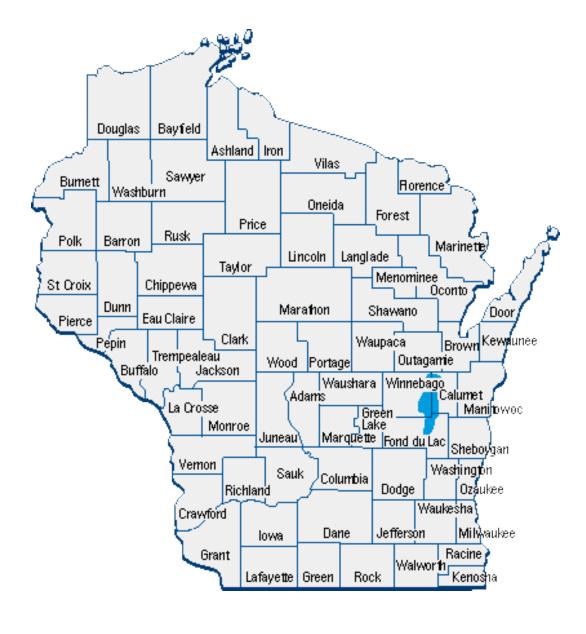


Douglas Bayfeld Ashland Iron Vilas Sawyer Bumett Horence* Washburn Oneida Forest Price Rusk Polk Barron Marinette Lincoln Langlade Taylor Menominee St Croix Chippewa Oconto Dunn Marathon Shawano Door Eau Claire Pierce Brown Kewaunee Clark Waupaca Pepin Trempealeau Outagamie Wood Portage Jackson Waushara Winnebago La Crosse Mani towec Green Lake Monroe Marquette Fond du Lac Sheboygan Juneau\ Vemon Washington Sauk Columbia Ozaukee Richland Dodge Waukesha Crawford Mili∦aukee Jefferson Dane lowa Walworth Kenosha Racine Grant Lafayette Green Rock

3.8M active voters







3.8M active voters

6,372 precincts







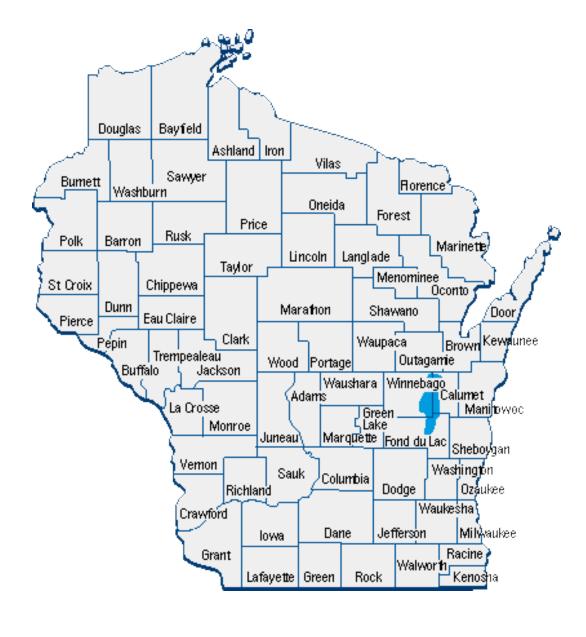
3.8M active voters

6,372 precincts

8,624 district combos







3.8M active voters

6,372 precincts

8,624 district combos

42% of precincts have more than 1 district combo





The Problems

+The traditional way of drawing maps and translating maps to updated voting files was manual and error-prone.





The Problems

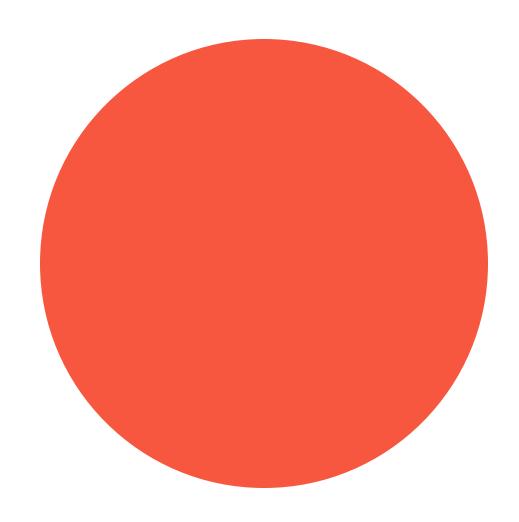
- +The traditional way of drawing maps and translating maps to updated voting files was manual and error-prone.
- +Geographic Information Systems make keeping track of voters and geographies more streamlined and less error-prone.

Solute



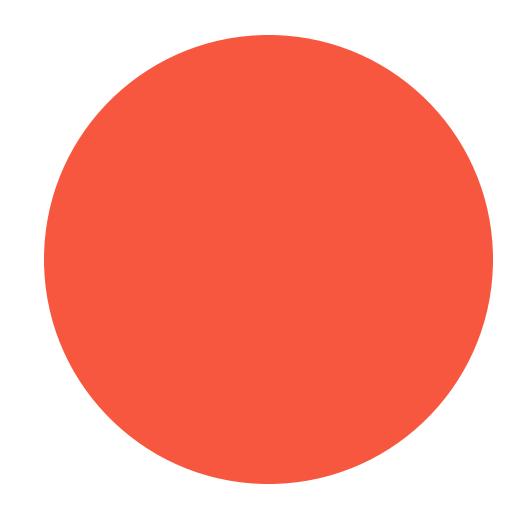
















— white ← — white ← ← white ← whi red white white white white white white white white red ← white ← red red ← white ← white ← white ← white ← white white white red white ← white ← white ← white ← white ← white ← red white ← white ← white ← white ← white ← white ← red ← red red - red white red ← red white ← white ← white ← white ← white red white red white ← white ← white ← white ← white ← red ← red red white — red white ← white ← white ← white ← white ← red ← red red white red - red ← red red white ← white ← white ← white ← ← white ← red white ← white ← white ← white ← ← red ← red red white red ← red ← red white ← white ← white ← white ← white red white white red - red white red ← white ← red ← white ← white ← white ← white ← white ← red red ← white ← white ← white ← white ← white ← white ← red ← white ← red red white white white white white white — white ← — white ← ← white ← — white ← white ←



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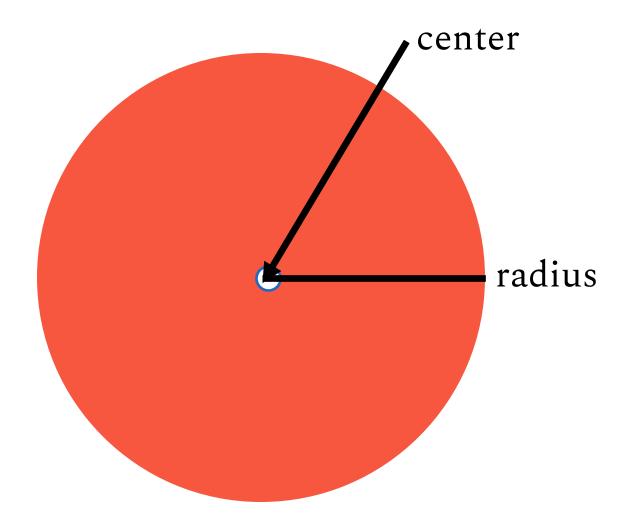


white • white — white ← white ← white ← white ← white ← red — red - red • white — white ← white ← white ← white ← red ← red - red • white — white ← white ← white ← white ← red ← red ← red • white ← red - red • white **←** red **←** red • white - red - red • white - red - red • white white white white white white red **←** red - red • white white white white white white white red **←** red **←** red • white - red — white ← white ← white ← white ← red ← red • white red — white ← white ← white ← white ← white ← red ← red • white — white ← white ← white ← white ← white ← red ← red ← red white — white ← — white ← white white white white white white white white white white



white • white — white ← white ← white ← white ← white ← red ← red - red • white — white ← white ← white ← white ← red ← red - red • white - red ← red • white white (white ← red - red • white white white white white white red **←** red **←** red • white - red - red • white - red - red • white white white white white white red **←** red - red • white white white white white white white red **←** red **←** red • white - red — white ← white ← white ← white ← red ← red • white red — white ← white ← white ← white ← white ← red ← red • white — white ← white ← white ← white ← white ← red ← red ← red white — white ← white white

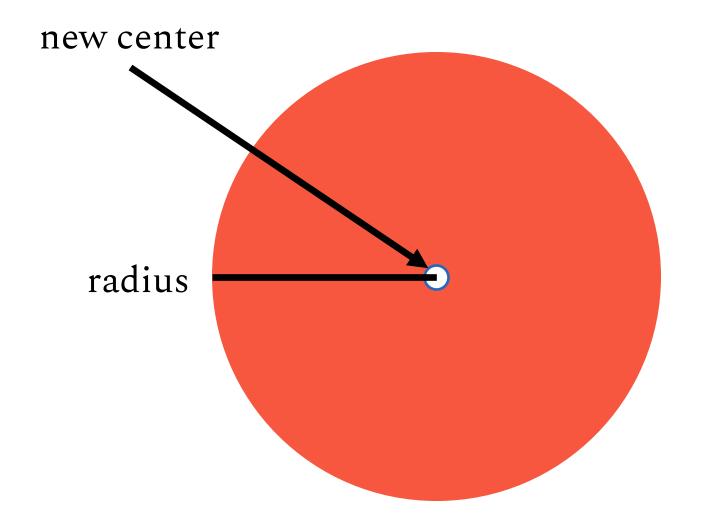




Color it red, the rest is white







Color it red, the rest is white





- +The traditional way of drawing maps and translating maps to updated voting files was manual and error-prone.
- +Geographic Information Systems make keeping track of voters and geographies more streamlined and less error-prone.

Solute







- +The traditional way of drawing maps and translating maps to updated voting files was manual and error-prone.
- +Some redistricting authorities may use outmoded ways of drawing (or describing districts) while election officials use more modern Geographic Information Systems (or vice versa).





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- +Voters given the wrong ballot
 - One estimate has 12% of voters being given incorrect ballots





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- +Voters given the wrong ballot
 - One estimate has 12% of voters being given incorrect ballots
- +Candidates running in the wrong district











Tools

< All







Books

: More

About 1,870 results (0.50 seconds)

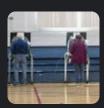


AP News

Some voters cast wrong ballots in split Nashville district

NASHVILLE, Tenn. (AP) — Election officials said Tuesday that some Tennessee voters have cast ballots in the wrong congressional district in...







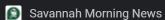
📆 FOX 13 Tampa Bay

Wrong ballots sent to 168 Hillsborough County voters following redistricting changes: 'This is not fraud'

The Hillsborough County Supervisor of Elections Office is thanking an eagle-eyed voter for discovering a mishap with the Tampa City Council...

1 month ago

About 12 results (0.29 seconds)



Elections Board error causes 4 early votes to go to wrong GA House race

Due to a Board of Elections error, 4 Chatham County voters from Precinct 8-1 will not get a say in their state representative race for May...











The Atlanta Journal-Constitution

Georgia Politics AJC Peachtree Road Race Opinion Sports AJC Live EPaper Newsletters

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Georgia candidate running in wrong House district







ELECTION MODERNIZATION WITH GIS





https://elections.nsgic.org/





Voter Registration Application Voter Registration Application, and State specific in The completing this form, review the General, Application, and State specific in This space for office use only. This space for office use only. As not complete form. As not complete form. As not complete age 18.)
Voter Registrate, Application of the General, Application of the General, Application of the General of the Gen
re completing true Yes No No Yes No Yes No No Yes America?
ten of the United Sefore electric these questions of the United Sefore electric the United Sef
Mr. DMiss are them 6 in the man
Mrs. Ms. Mail If Different From Above



Improving
State Voter
Registration
Databases

FINAL REPORT

NATIONAL RESEARCH COUNCIL





253 million eligible







253 million eligible



210 million registered







253 million eligible



210 million registered







253 million eligible



210 million registered



90 million move within state (43%)







253 million eligible



210 million registered



90 million move within state (43%)









9.5 million die (5%)



253 million eligible



210 million registered



90 million move within state (43%)









9.5 million die (5%)



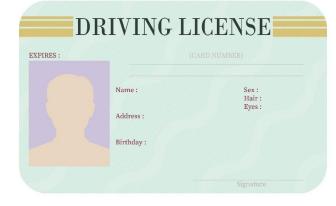
253 million eligible



210 million registered



90 million move within state (43%)













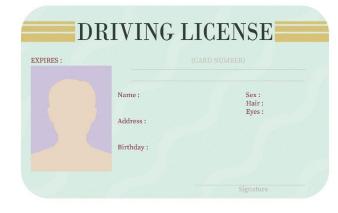
253 million eligible



210 million registered



90 million move within state (43%)

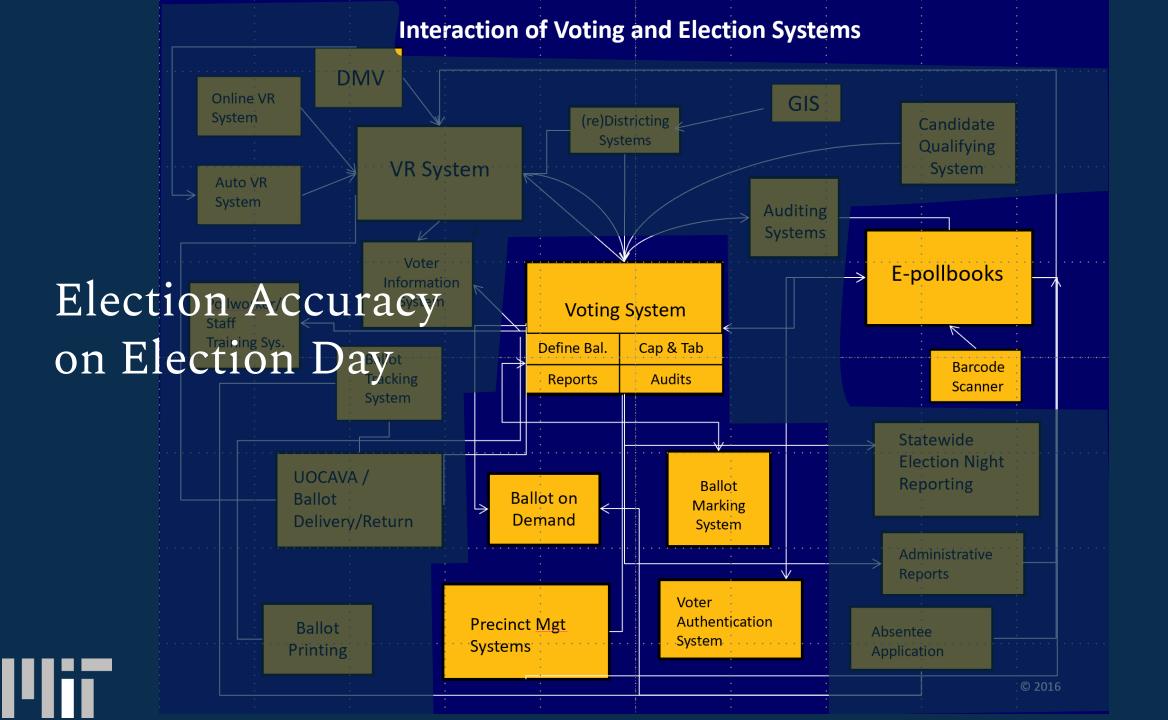








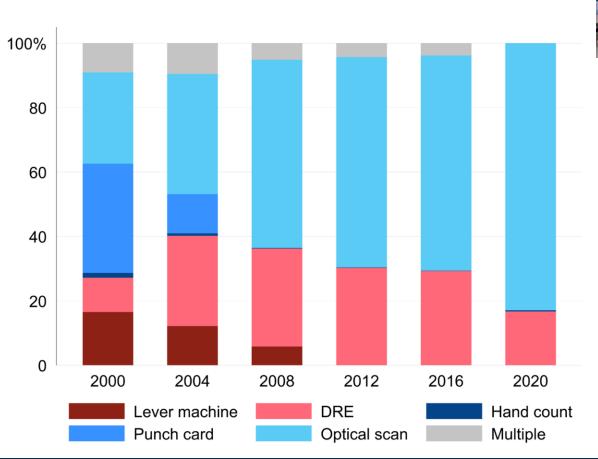








1700s to now





1890s to 2010



1960s to 2010



1960s to now



1970s to now





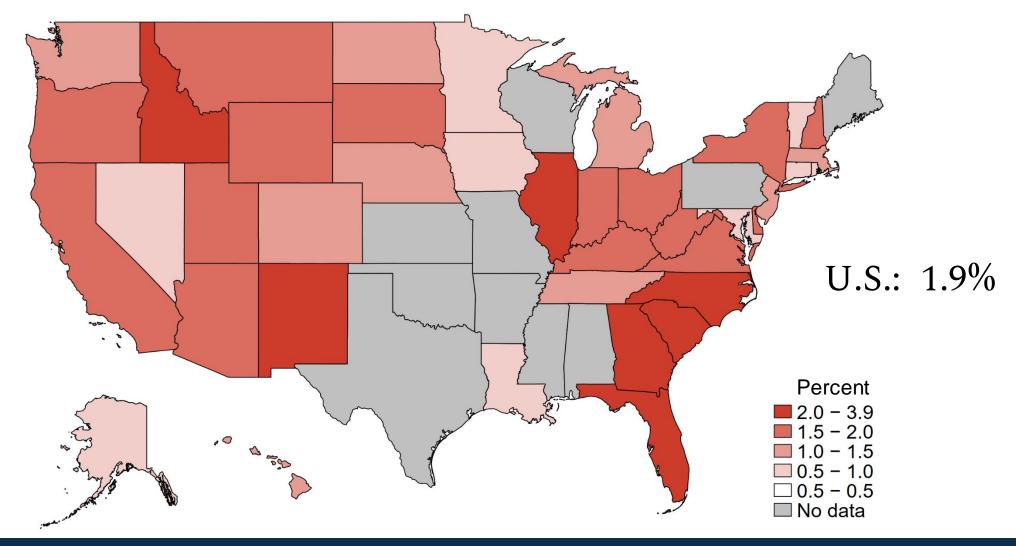
Residual Vote Rate Is (ONE) Measure of Accuracy

Overvotes + Undervotes
Turnout





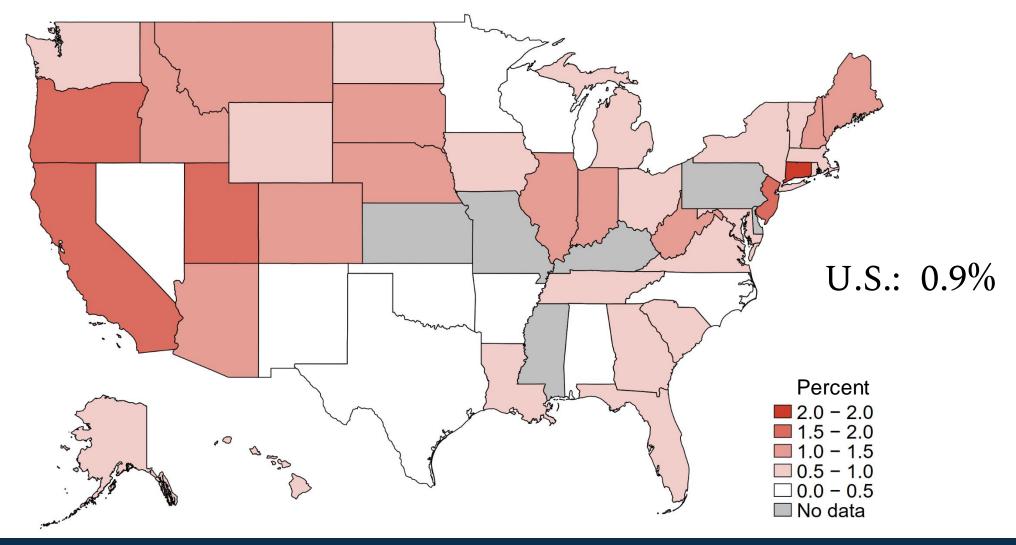
Residual Vote Statistics in 2000







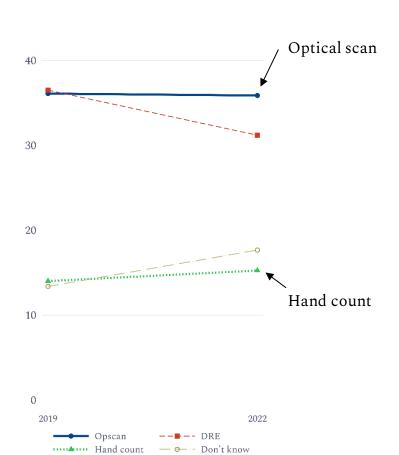
Residual Vote Statistics in 2020







Hand-Counting vs. Optical Scanning

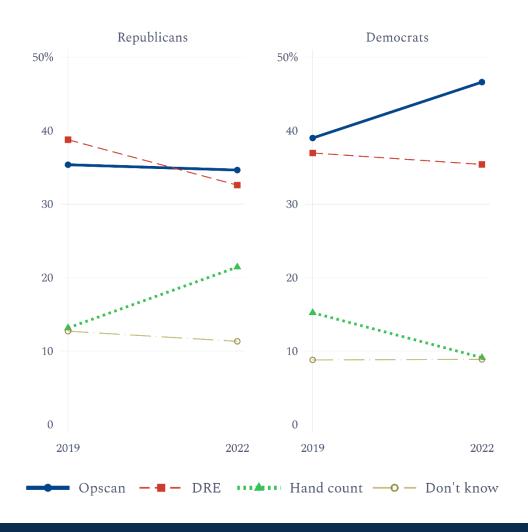


Which type of voting machine would you prefer to vote on?





Hand-Counting vs. Optical Scanning



Which type of voting machine would you prefer to vote on?





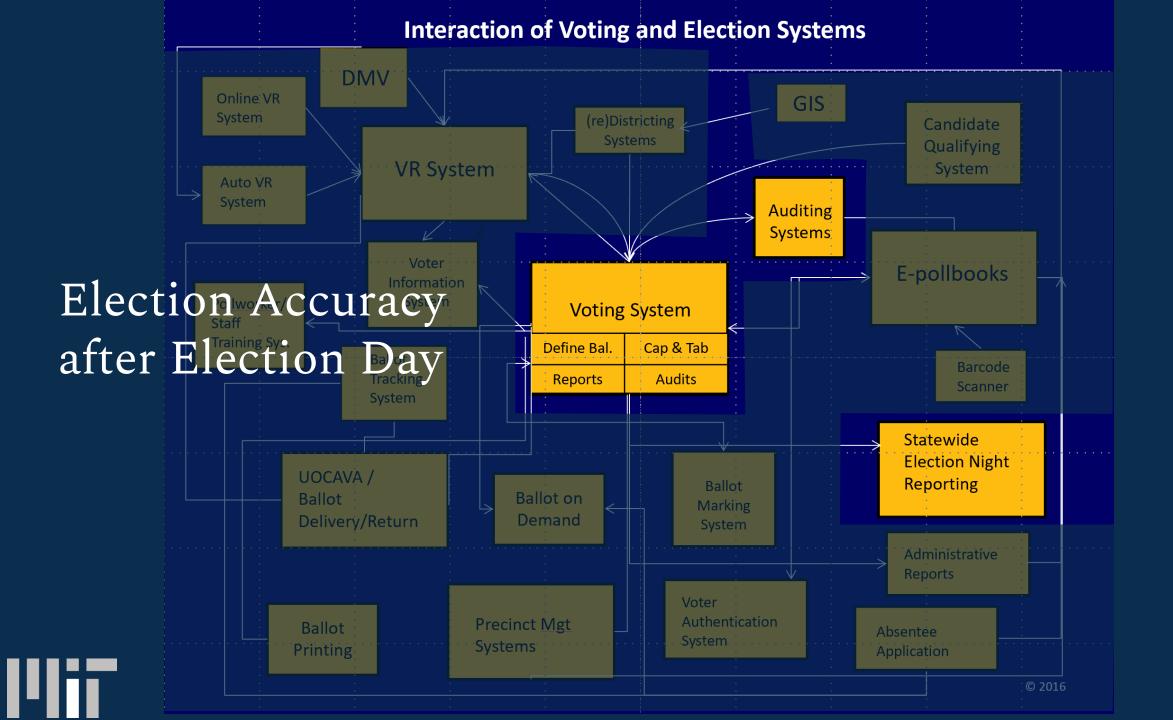
Research on Accuracy of Counting

- +Hand counting is slightly less accurate than optical scanning
- +Counters are subject to fatigue











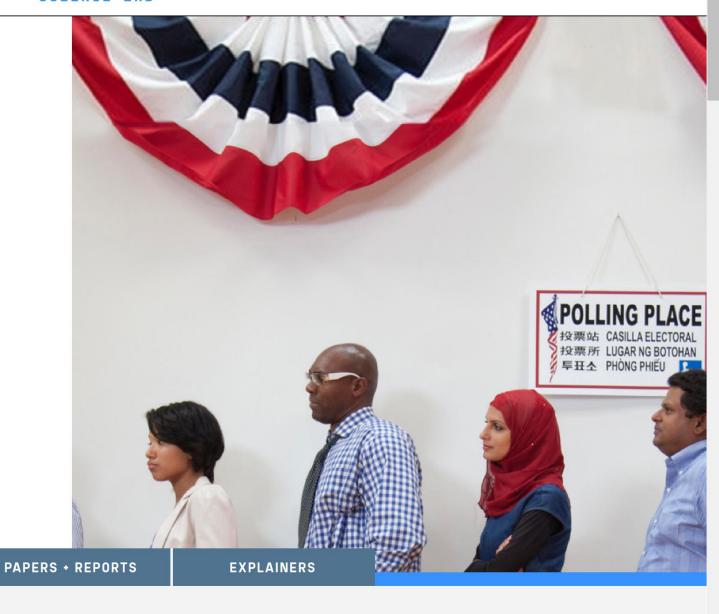




ABOUT

RESEARCH

Using data-driven scientific analysis, we strive to better understand how elections function in the U.S. Here we provide a guide to core research by MEDSL and others in this area.











From 2020 post-election audits

- +Individual ballots examined: 1,079,499
 - 480 (0.044% or 4.4/10,000) had at least one discrepancy
- +30,407,442 candidates received votes on these ballots
 - 6,763 (0.022%, or 2.2/10,000) saw the vote go to another candidate in the audit.









Chicago Daily Tribune

VOL. CVII - NO. 264

WEDNESDAY, NOVEMBER 3, 1948

. . FOUR CENTS - PAY NO MOR

G. O. P. Sweep Indicated in State; Boyle Leads in City

Town Balloting Gives Trend

Probable Winners

SENATOR-Wayland Brooks (R.)*

SECRETARY OF STATE-WII-

liam G. Stratton (R.) AUDITOR-Sinon A. Murray (R.)

BY ARTHUR EVANS

REPUBLICAN Tops Coghlon RECOR

ing to Chief Clerk

John S. Rusch of the

The old record was

election

SANITARY DISTRICT TH TEES (3)-Frank W. Chesrow (D.),

mir Griglik (D.) or Walter E. Mc- 000 was indicated in

BY GEORGE TAGGE

Heavy Democratic board. This prediction leads in Chicago wards | was based on a projecdarkened the outlook tion of 1,789,776 one last night for Repub- hour before the polls lican candidates for closed. state's attorney and TOPS 1944 RECORD

ty: Dixon D 3,968.

State's Attorney --524 pcts. of 5023 in Cook county: Boyle D 134,682, Coghlan R80,-100. Heller P 3,959.

Secretary of tate-14 pcts. of 4143 in

cago: Smith D 3,994, established in 1944. Droste R 1,475.

cts of 2,217Truman 85; Dewey 2, Wallace 2.

Rhode Island sana

tor. 4 districts of

366; Green D 557, Haz-

Columbia, S.C., Nov.

2-(AP)-Gov. J. Strom

rights presidential

Florida--60 pre-Truman 11,657, Wallace precincts, Acker

Georgia-105 out of | his home state's eight 1.736 precincts Truman | electoral 2,272, Dewey 325, votes today. Thurmond 690, Wallace

tucky where Sen. Cooper panager of the Dewey

Sizable Electoral Margin Seen

BY ARTHUR SEARS HENNING Dewey and Warren won sweeping victory in the Presidential election yesterday.

The early returns showed the Republican ticket leading Truman were that the complete smoltsoibri edT .ees ern and western stareturns would disclose that Dewey won the Presidency by an overwhelming majority of







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ATTY. GEN.-George F. Barrett

BY ARTHUR EVANS

REPUBLICAN Tops Coghlan RECORD CITY IN Hot Race For Attorney VOTE SEEN IN

Probable Winners

STATE'S ATTORNEY-John S. Boyle (D.) or Malachy J. Cogh-RECORDER OF DEEDS-*Vic-

tor L. Schlaeger (D.) CIRCUIT COURT CLERK-John E. Conroy (D.) or Mrs. Mabel

SUPERIOR COURT CLERK-Henry Sonnenschein (D.)

TEES (3)-Frank W. Chesrow (D.), John A. Cullerton (D.), and Casimir Griglik (D.) or Walter E. Mo-

BY GEORGE TAGGE

last night for Repub- hour before the polls lican candidates for closed.

Suburban Ballot Near 375,000

A nigh record vote CORONER-'A. L. Brodie (D.) seemed certain for Chicago yesterday in the first post-war SANITARY DISTRICT TRUS | Presidential election.

the final sampling of precincts in each of the 50 wards, according to Chief Clerk John S. Rusch of the Chicago election Democratic board. This prediction leads in Chicago wards | was based on a projecdarkened the outlook tion of 1,789,776 one

state's attorney and TOPS 1944 RECORD The old record was

rresident--749 pcts. of 5023 in Cook county: Truman D 182,780. Dewey R 128,916, Wal

COOK COUNTY

Senator -- 481 pcts. of5023 in Cook county: Brooks R 70,465.

Governor -- 481 pcts. of 5023 in Cook county Green R 68,973.

Lieutenant Governor-14 pcts. of Cook county: Dixon D 3,968. Rowe R 1.495.

+---State's Attorney --524 pcts. of 5023 in Cook county: Boyle D 134,682, Coghlan R80,-100. Heller P 3,959.

Secretary of tate-14 pcts. of 4143 in Chicago: Barret D 4 .-

cago: Smith D 3,994, established in 1944. Droste R 1,475.

Secretary of State --4 precincts of 9,231 in Illinois, Barrett D 415, Stratton R 633.

Birmingham, Ala., Nov. 2 (AP)-Gov. Thurmond, the State Rights Democratic candidate. won Alabama's 11 electoral votes.

Alabama 2 boxes of 2.408. Thurmond 116. Dewey 37. Wallace 3.

Arkansas--2 districts of 2,217Truman 85; Dewey 2, Wallace 2.

Florida--60 cincts of 1,523, Dewey ruman 11,657, Wallace 1.151; governor, precincts, Acker 2.369, Warren D 9,743,

1.736 precincts Truman | electoral 2,272, Dewey 325, votes today. Thurmond 690, Wallace

polling places of 221,233, Wa ace 1, 389; governor ling places He.

Oklahoma-senator precincts of 3701 Kerr

3,264, Lausche

Rhode Island-4 districts of 266. Truman 545, Dewey 1,294, Wal-

Rhode Island sana tor. 4 districts of 366; Green D 557, Haz-

Columbia, S.C., Nov. 2-(AP)-7ov. J. Strom Thurmond, rights presidential candidate, captured Georgia-105 out of | his home state's eight

Early Count Gives G.O.P. Senate Edge

BY WALTER TROHAN Republicans took an early lead in one of the hottest campaig

retention of control assured when New Mexico appeared to be deserting solid Demo-

Republican, took an early lead over former co. one of eight pivohoma, where former Rizley(R.). The G.O.P.

Sizable Electoral Margin Seen

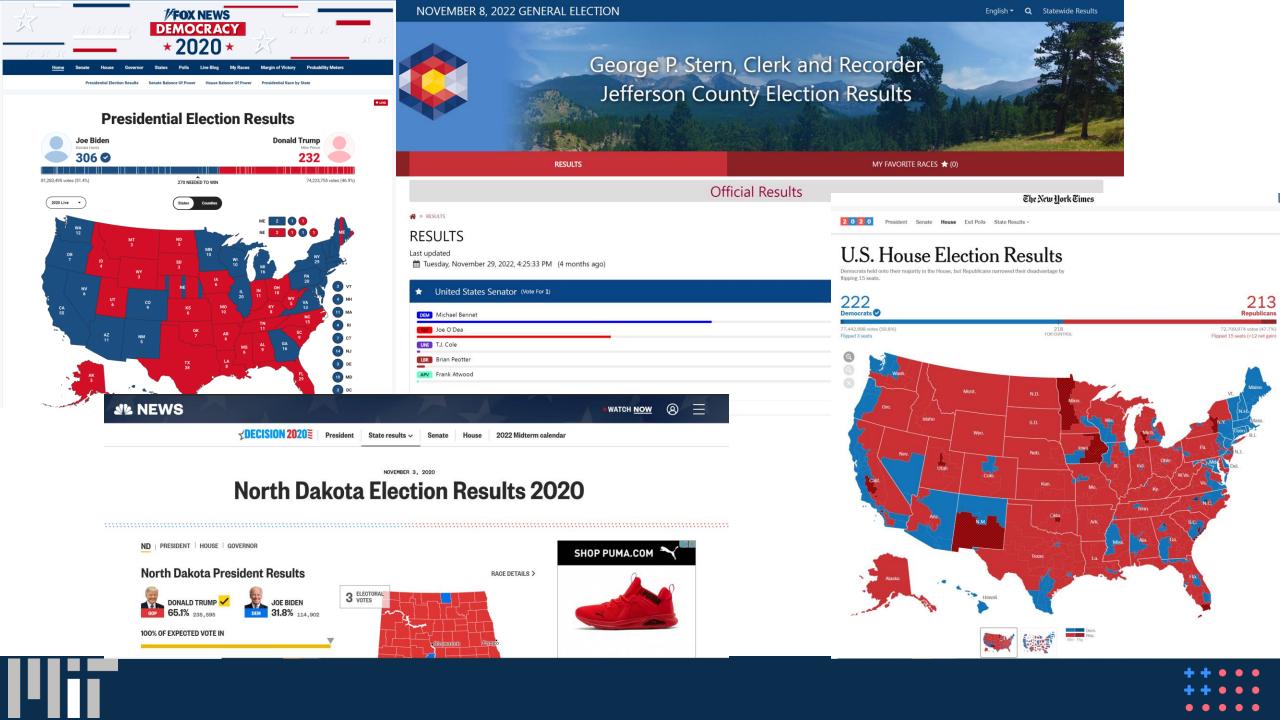
BY ARTHUR SEARS HENNING Dewey and Warren won a sweeping victory in the Presidential election yesterday.

The early returns showed the Republican ticket leading Truman were that the complete tes. The indications ern and western staconsistently in northand Barkley pretty returns would disclose that Dewey won the Presidency by an overwhelming majority of "electoral votes.

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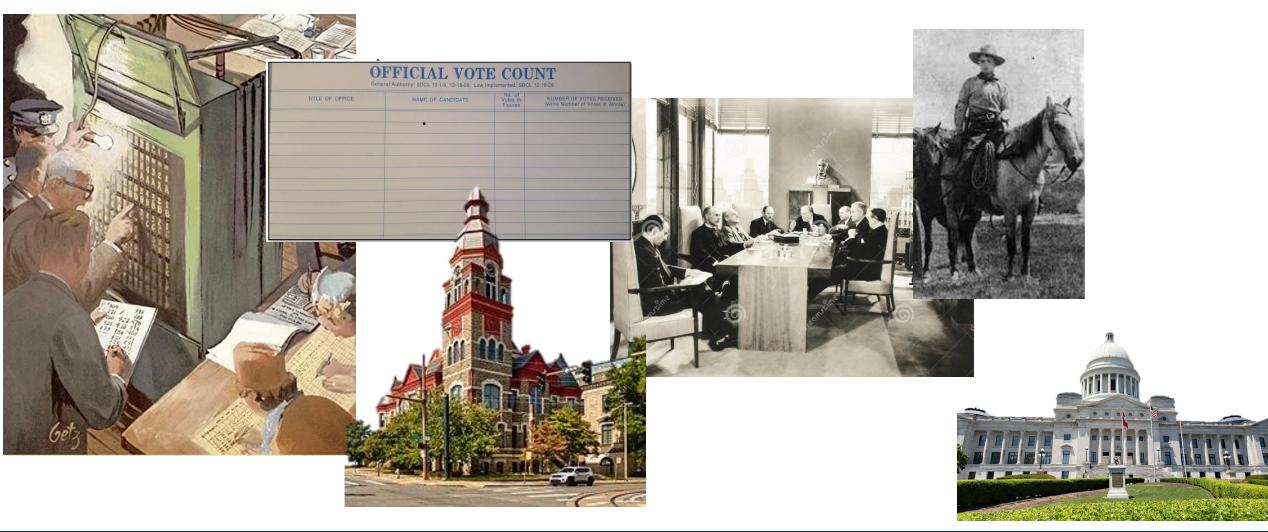


























New-York Times.

VOL. X .-- NO. 2849.

and the state of the

NEW-YORK, WEDNESDAY, NOVEMBER 7, 1860.

PRICE TWO CENTS.

the standard to

To Tall Modern

A. Car - 150

THE PRESIDENTIAL ELECTION.

Astounding Triumph of Republicanism.

The North Rising in Indignation at the Menaces of the South.

Abraham Lincoln Probably Elected President by a Majority of the Entire Popular Vote.

Porty Thousand Majority for the Republican Ticket in New-York.

One Hundred Thousand Majority in Pennsylvania.

Seventy Thousand Majority in Massachusetts.

Serresponding Gains in the Western and North-Western States.

Preponderance of John Bell and Conservatism at the South.

Results of the Contest upon Congressional and Local Tickets.

NEW-YORK CITY.	1
VOTE ON THE PRESIDENTIAL TICKET	
Pirst District	9 2 8 4 8 0
Majority SECOND WARD. 93	٥
Piret District 110 21 Second District 103 20 Total 222 50 Majority 280	4
THIRD WARD.	-
Pirst District. 60 21 Second District. 75 12 Taird District. 60 17 Fourth District. 35 0 Total. 285 57	4
Majority 20	6
FOURTH WARD.	, 1
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Total 528 163 Majority 130 FIFTH WARD,	
First District 139 24 Second District 92 14 Third District 92 14 Third District 146 31 Fourth District 229 Fifth District 137 36 Sigh District 147 Seventh District 164 29 Shehth District 164 29 Shehth District 80 29	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tetal	Ö
Majority101	°l
Pirst District	10 16 27 12 10
Total 296 281 Majority 241	17
SEVENTH WARD.	"
Third District 148 2: Fourth District 95 10	46

_		
	MOULT District	1
- 1	Third District 309	453
- 1	Fourth District. 125 Fifth District. 130	147
- 1	Fifth District	185
٠.		
-1	Seventh District tes	273
. 1	Eighth District 87	176
ě l	Ninth District	
	Minute District	226
5 1	Tonth District	969
21	Tonth District 74 Eleventh District 159	297
8 4 8	Twellin District. 99	535
8 [Thirteenth District 48	455
5	Fourteenth District 50	243
9 1	A COLUMN SOURCE CO. C.	
5	Total	3,831
- 1	Majority	2,073
٠.	NINETEENTH WARD.	
	PERDIBERIN WARD.	
• [Piret District 212	419
ĒΙ	Second District. 200 Third District. 229	334
őΙ	Third District 329	443
۰.	Fourth District 263	373
- 1	Fifth District	206
ρĺ	Fire Arminettaliant and Arm	206
7	Total	1,548
4	Majority	774
	Michael Management and Contract	
1	TWENTIETH WARD.	
ī	Majority TWENTIETH WARD.	327
	Second District 100	200
6	Third Dieletet	***
. 1	Powerly District	414
اه	FOURTH District	234
	Pinh District 150	251
0	Sixth District	300
1	Seventh District 207	207
1	Eighth District 1985	1992
2	Ninth Dietriet	200
4	Theoretic Districted	200
ā	Tenen District	308
21	Eleventh District 212	364 366
9	Twelfth District 193	386
5	Thirteenth District	298
٠,	Tweifth District 198 Thirteenth District 155 Fourteenth District 202	234
- 1	Total	2000
2	Total2748	4332
7	Atajority	1574
3		
il	First District 183 Second District 116 Trure Insuret 149 Fourth District 147	235
â۱	Spanned District	271
9	Tribet Increase	321
βl	Powerb Triotelet	
	Fourth District	258
0	Fifth District 106	344
ö	Sixth District	198
š	Seventh District	195
9	Sixth District 99 Seventh District 74 Eighth District 108	161
. 1	Ninth District	210
8	Tenth District	206
6	Teller District	
9 1	Eleventh District	290
6	Twelfth District	273
0	Thirteenth Dirtriet 226	276
8	Fourteenth District 227	225
7		-
2	Total 2230	3483
0	Majority	1253
67202	TWENTY-SECOND WARD.	
		1000
7	Pirst District	261
i	Second District	296
	Third District 212	1248
9	Fourth District 999	226
6	Fifth District	150
6	Fifth District 127 127 128 128 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129 129	
	Statin Appetrict	115
4	Seventh District	344
13	Eighth District 167	181
12	Ninth District 245	256
100	Marrie Branch and Committee of the Commi	2.40

132	Ningaru 51	4446	385			100
17	Oneida 3185	1101	2593	2225	3000	
5	Onondaga 4120	****	2251	****	3500	- 23
_	Untario 690	****	467			- 11
73	Orange	1846		2002		- 11
16	Orleans 621		618			
10	Oswego 3388		2154		3000	
05 82	Otrego 1549	****	\$57	4444		- 5
82	Pulmam	612	4114	192		-
97	Queens	3029	****	2223		-
36	Renseelaer	3830		2931	****	
55	Richmond	2760		861		- 63
42	Reckland	1795		1002		- 2
	Saratoga	593		65	4444	
31	Schenectady	386		1	****	- 0
73	Schoharie	2001		1302	****	- 2
	Schuyler 1103	4577	63	4440		- 1
	Seneca	727	war.	460		
13	Stenben 2019	****	909	4444	2000	- 5
31	St. Lawrence. 6416	****	4499	4440	1000	- 7
43	Suffeik	1432	***	978		- 0
73	Bullivan	1930	4477	3432		- 0
an.	Jioga 742	4419	443	++++	1000	-2
-	Tempkins 1119	1000	760	21.24	3090	- 1
46	Ulater	6901		1882	2000	- 1
74	Warren 461		600	1000	2000	- 0
	Washington., 1694		BTWS	****		- 7
Τ.	Wayne 200	****	3445	-2222	2000	100
w.	Westchester	DERL.	200	2223	Section	- 1
29	Wyeming 1584	16000	1016		1111	- 5
14	Yates 1728		1000		****	7
94	The state of the s	4.700	-	A1500		- 7
44	- Total	94478	1. 1. 1. 1.	1450		
	MINCHIE	T. A SERVICE				

MISCELLANEOUS RETURNS.

GRANGER COUNTY, -- Batavia -- Lincoln, 150 majoricy. Leroy-Lincoln, 214 majority. Alexander-213 for Lincoln.

WYCMING COUNTY, -Attica-Lincoln, 131 majority. LIVINGSTON COUNTY .- Genesco-Lincoln, 124 majority. Avon-Lincoln, 116 majority. Dansville-Fution, 24 majority. Lima-Lincoln, 110 majority.

Rochester City, complete-Lincoln, 975 majority. CHENUNG COUNTY. - Chemung-Lincoln, 100 majority. Horseheads-Lincoln, 30 majority; Republican gain, 75.

STRUBER COUNTY,-The town of Corning gives Lincoln 238 majority. Hornby-Lincoln, 79 majority.

Temparsa County,-Town of Ithaca-Lincoln, 679; Pusion, 862. Fusion loss of 31. Trees County-Barton, 50 majority for Lincols-

Republican gain, 87; Owego, Lincoln's majority, 300; Nichols, 152 Lincoln's majority; Smithboro, Fusion, 7

Three towns in Livingston County give Lincoln 351

ONTABIO COUNTY-Manchester, Lincoln, 57 majority Phelps, Fusion 5 majority.

SENECA COUNTY-Seneca Palls, 62 majority for Lin-

CAYUGA COUNTY-Auburn City gives Lincoln 449 majority-a Republican gain over any previous vota of 149. Eleven Election Districts give 415 Republican gain over 1859.

SENECA COUNTY-Waterloo, 25 majority for Fusion. WAYRE COURTY-Palmyra, Lincoln, 67 majority;

publican majority; Pittsburgh complete, 2.457 Re. publican majority; Alleghany City, Republican majurity 1,875. Increase in thirty-one Districts heard from 2,300 on October.

WESTCHESTER COUNTY-West Farms,-The Union Electoral ticket has a majority of 147 : Kelly, 475 ; Mergan, 279; Brady, 54. Congress, Haight, Union, majority 125.

MASSACHUSETTS.

Bosrey, Tuesday, Nov. 6.

One Hundred and Forty-nine towns, not including Beston, give Lincoln, 53,299 : Douglas, 15,724 ; Breckinridge, 3,197. These towns comprise about half the State. Lincoln's plurality can hardly be less than

Mr. Andrew is elected Governor by about the same vote. The Legislature is largely Republican.

Alexander H. Rice is redlected to Congress in the Fourth District."

Ancen Burlingame is defeated in the Pifth District. In the Ninth District Geo. F. Barley is elected to Congress by 1,800 majority over His Thayer.

The Republicans have carried all the Congressional Districts, except the Fifth, in which Mr. Burtingame is defeated.

CONNECTICUT.

Mr. Lencous has 276 majority and 1,346 plurality. Six towns, including Hartford, show a Republican gain over last Spring, of 1,015. LINCOLN'S majority in the State will be several thousand.

Norwich-Lancers, 1,257; Dovers, 862; Breck-INSIDER, 72; BRILL, 35;

Westport-Limous, 203; Dovelas, 52; Fusion, 215. Reading-Lincoln, 176 , Bascainaipes, 66 ; Doop-LAS. 3.

Ridgefield-Lincoln, 290; Union, 20; Douglas, 4 Breckinridge, 113.

New-Canaan-Lincoln, 308; Douglas, 13; Breckin ridge, 8; Union, 182; Beil, 6. Walten-Lincoln, 237; Douglas, 29; Breckinridge

84; Bell, 10. Bridgeport-Lincoln, 1,110; Breckinridge, 402

Douglas, 475; Bell. 19. Fairfield-Lincoln, 396; Breckinridge, 189; Doug-

as. 11 · Bell. 30. Easton-Lincoln, 121; Breckinridge, 65; Doug

Monroe-Lincoln, 113; BreckinridSe, 137; Douglas ; Bell, 1.

Huntington-Lincoln, 150; Breckinridge, 121; Douglus, 19 ; Bell, 6.

Westen-Lincoln, 55; Breckinridge, 99; Douglas 1 ; Bell, 2.

ELECTION DAY IN THE CITY

ALL QUIET AND ORDERLY AT THE POLLS

Progress of the Voting in the Several Wards.

THE CITY AFTER NIGHTFALL.

Unbounded Enthusiasm at the Repub lican and Bell-Everett Head-Quarters.

THE TIMES OFFICE BESIEGED.

Midnight Display of Wide-Awakes.

BONFIRES AND ILLUMINATIONS.

The clouds lowered gloomily over the City you terday morning, when the polls were opened, and very shortly afterward rain began to drizzle, with every prospect of a wet day. Was it an omen, and if to, an ill omen to the Lincoln or Fusion ticket? It did not, at any rate, keep one or the other party from the polls, for never in the history of any political contest in this country, has more enthusiasm been exhibited, and the result has proved that though the " clouls" may have " lowered," the hopes of the Republican Party were not " in the deep bosom of the ocean buried." But of that anon and elsewhere,

People generally were awake-wide awake, in fact -very early yesterday, for they knew they had a duty to perform which could not occur but once in four years, and in the actual shape it assumed, perhaps not more than once in a lifetime. And whether they were Republicans or Fusionists, they went to work with a will. The clouds were dispelled; the sun shope forth as a beneficent sun should shine on such an opeasion, and a general good time































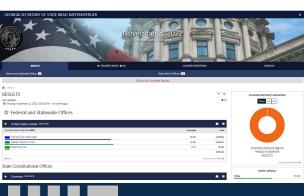






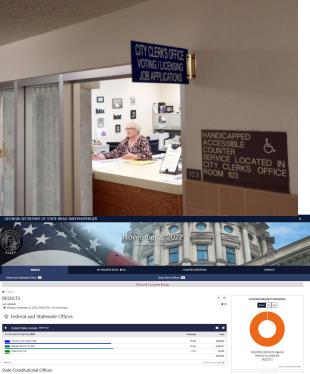










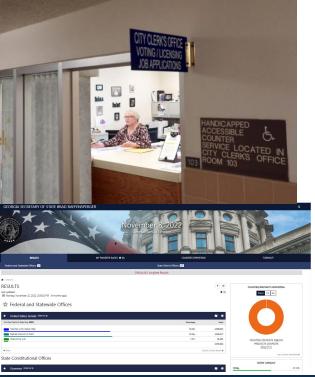


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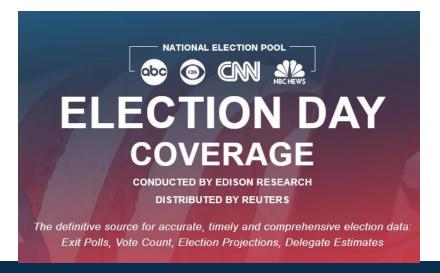








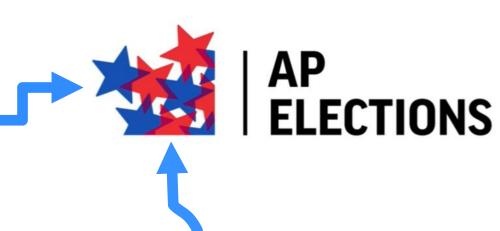


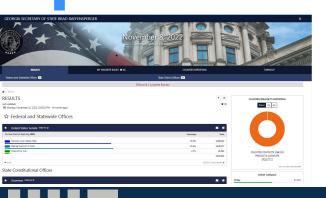






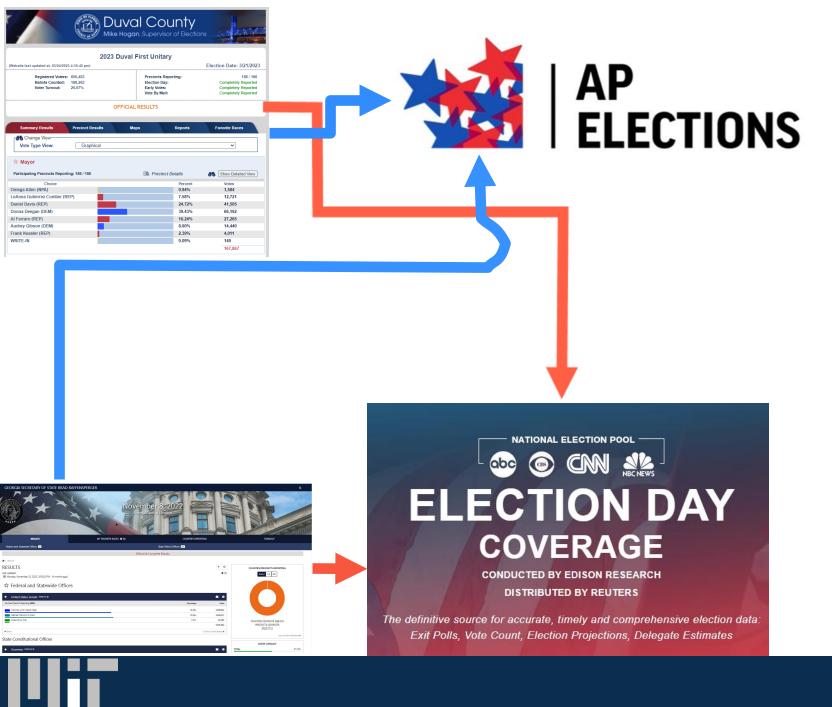




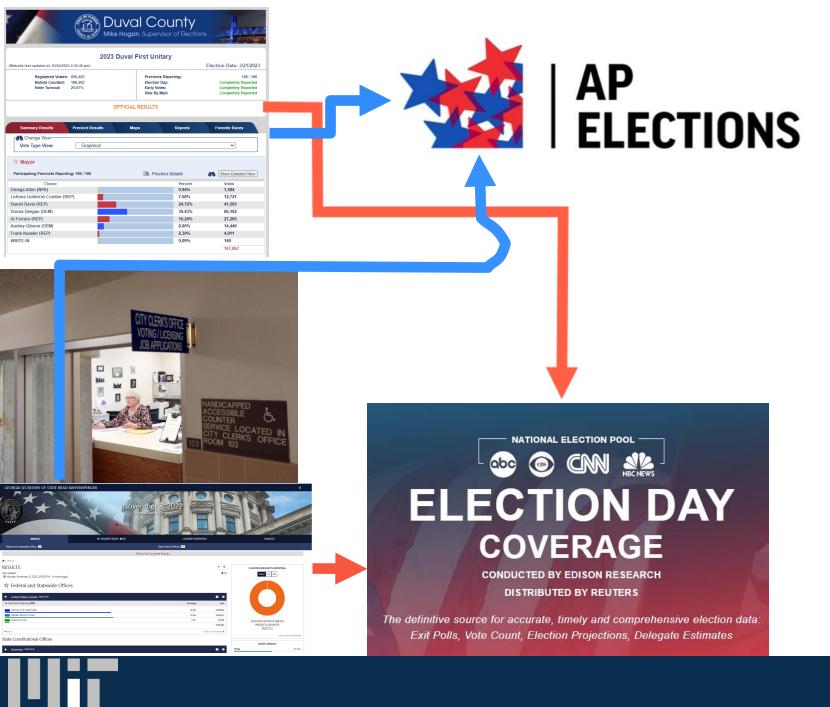




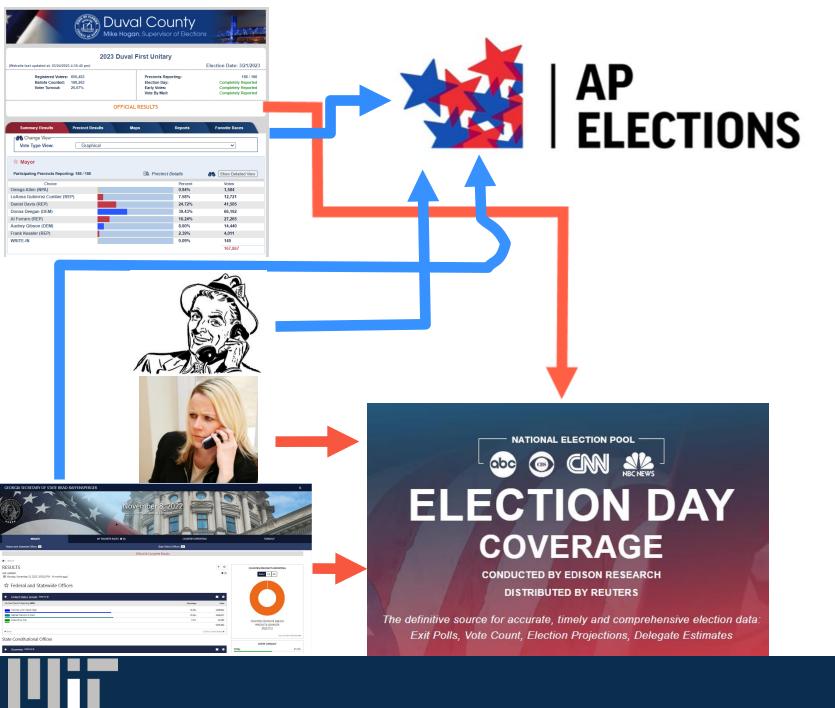




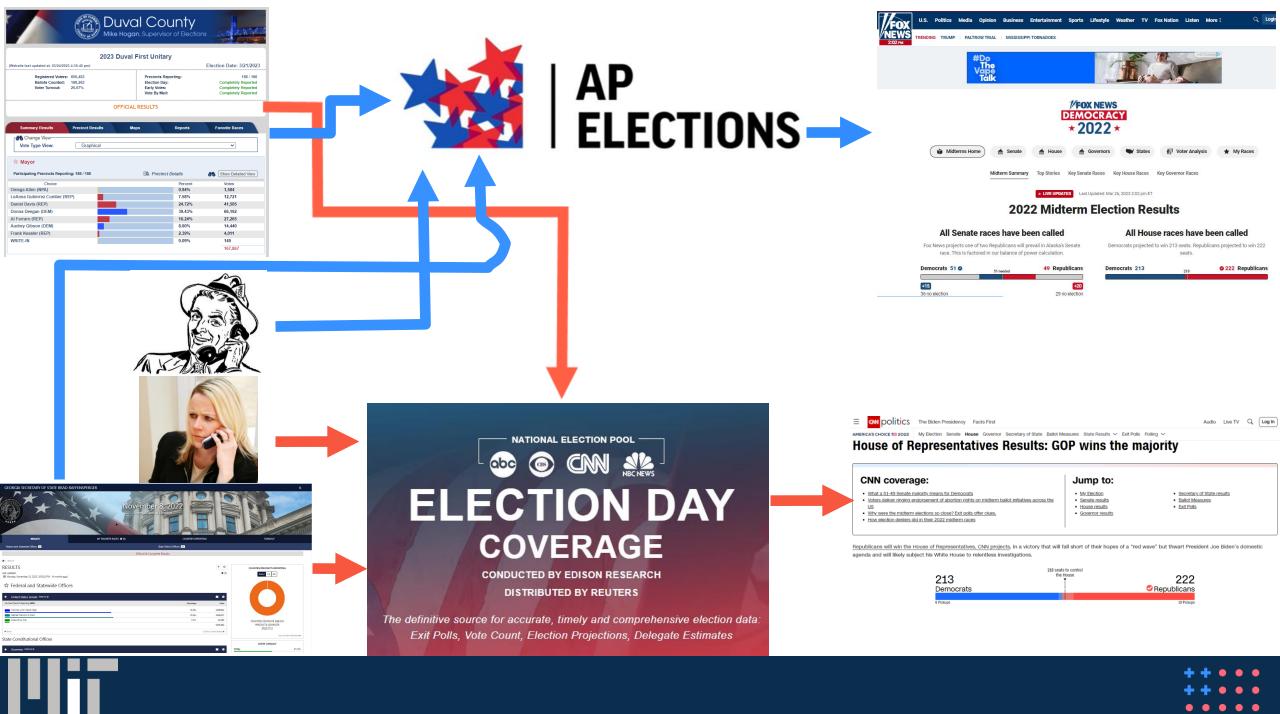












ENR Issues





ENR Issues

Confusion between official election results and reports of unofficial election returns









Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage







Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage

Phantom Voters





Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage

Phantom Voters

Errors





Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage

Phantom Voters

Errors

Discrepancies between state and county results





Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage

Phantom Voters

Errors

Discrepancies between state and county results

Discrepancies between government and media reports





Confusion between official election results and reports of unofficial election returns

Blue Shift/Red Mirage

Phantom Voters

Errors

Discrepancies between state and county results

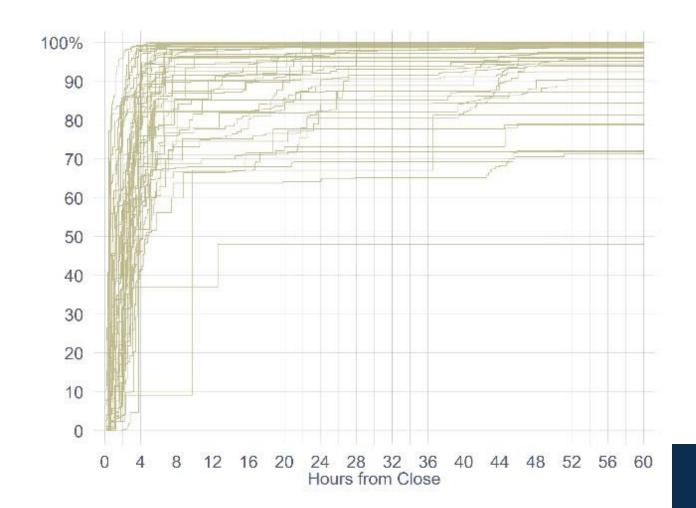
Discrepancies between government and media reports

Vulnerability of ENR systems to cyber attacks





Speed of reporting







Policy Considerations for Accurate and Timely Election Reporting

- +Automate reporting and publish election night results directly
- +Report results at the precinct level
- +Establish lines of communication with the AP and Edison
- +Mail ballots:
 - Allow/require local jurisdictions to process mail ballots before Election Day
 - Require mail ballots to arrive by Election Day
 - Impose deadlines on local jurisdictions to report election results





A Word about Artificial Intelligence

- +AI: The use of past patterns in data to predict future patterns in data
- +ChatGPT, chatbots: predicting the next word based on the current word
- +Deep fakes: do a better job of blending images than photoshop
- +Implications for accuracy: the same as any technology





Thank you!





https:\\electionlab.mit.edu



