

TENNESSEE VOTERS FOR ELECTION INTEGRITY

Ensuring Election Integrity for Tennessee Voters

November 17, 2021



TENNESSEE VOTERS FOR ELECTION INTEGRITY

SO WHAT IS NEEDED...

- Implementation of a voting model that supports:
 - Authentication of the **Vote**: Voter rolls and voting centers
 - Authentication of the **Ballot**: Ensure vote is secure.
 - Authentication of the **Count**: Counted as cast, audit the tabulation
 - **Open air technology** put voter closer to their vote.
 - Transparent process




TENNESSEE VOTERS FOR ELECTION INTEGRITY

WE ARE A CITIZENS GROUP.


- Expertise in IT, info systems, data systems, auditing and pro-esses
- **Smaller group** to those pursuing an audit, support each other
- **Our interests / priorities (but not limited to):**
 - Internal (local/state systems).
 - National (states and think tanks).
 - Manual, courts, post workers, legislators, committees/commissioners, and
 - Consumers/citizens, open meetings

Comprehensive Voting Model Recommendations



01. **Authentication of the Vote**: Voter rolls and voting centers
02. **Authentication of the Ballot**: Ensure vote is secure
03. **Authentication of the Count**: Counted as cast, audit the tabulation
04. **Open air technology**: put voter closer to their vote
05. **Transparent process**
06. **Implementation of a voting model that supports**

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OUR CONCLUSION: COMPROMISED SECURITY ISSUES EXIST.

- **Electronic voting systems**
- System standards weaker than last smartphone (2005 vs. 2021)
- Standards not fully enforced by entities charged with doing so
- Vendors (not citizens) control process. Ballot/MD/scrutiny/post-election.
- **Electronic voter files**
- Voter rolls and voting centers
- Poll watchers/voters critical component, organization, training weak
- **Ballot scanner vendor files**
- Tabulating, vendor system control, post-election reporting, auditing
- **Ballot scanner vendor files**
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TENNESSEE VOTERS FOR ELECTION INTEGRITY

PROBLEM: FRONT DOOR VOTER ROLL, DATA INTEGRITY, MANAGEMENT ARE CONCERNING.

- Data as a valuable commodity
- County Voter File 1.2/burdened, **unclear, assigned** can be managed
- Downstream functional and security concerns
- County/state voter, **simultaneous in constant flux** - potentially during voting process --
- **County/state voter, simultaneous in constant flux** - potentially during voting process --
- **County/state voter, simultaneous in constant flux** - potentially during voting process --
- **County/state voter, simultaneous in constant flux** - potentially during voting process --
- High voter mobility = high frequency of move into/out of county

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SOLUTION: FRONT DOOR

MORE AGGRESSIVE WITH VOTER ROLL INTEGRITY.

- County List Maintenance Program
- Continue USPS NCOA system; State review of TN Dept of Safety address records; Periodic delivery resources.
- Reconducted Juror lists
- Enhance county-level access to more voter resource resources such as:
 - ES&I (USGJ) 3130 voter name access to TN Dept Safety;
 - State Person's Master Database;
 - County databases (e.g., residence or commercial address).




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SOLUTION: FRONT DOOR

MORE AGGRESSIVE WITH VOTER ROLL INTEGRITY

- Enhanced review of overall Voter Registration software and process
- Review existing State Court online processes to check for functionality and ensure data integrity; proactive monitoring, etc. AND recommend additional standards as needed
- Data logs: checks as SCRS to detect invalid and/or bad data
- Final Dev-Code and Pre-test Analysis record wipecheck on cleanup
- Enhance Street Location and List Maintenance Interface
 - to troubleshoot voter issues, support audits



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PROBLEM: FRONT DOOR

"CONVENIENT" VOTING CENTERS ARE AN OPENING FOR FRAUD.

- Complete Database of CITIES, JRS, School, voting centers
- But: Require more vet connectivity, which can be exploited by malicious actors
- List contents of valuable pre-processed data and the ability to more quickly identify suspicious activity
- Secure processing of data centers - *How's 7/2020?*
- Even high-dollar cost and time to implement
- Facebook, Market Central Systems, JRS (Voter, D&D/CPM),
- Criteria have lesser access for **SENS UNIT** over **CONVENIENCE** of voting centers

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SOLUTION: FRONT DOOR

ELIMINATE VOTING CENTERS.

- Voting Centers
 - Rely on Ballot Marking Device (BMD) (Turned to h)
 - Are costly, vendor-heavy, complicated, not transparent
 - Return to B recognized voting, which
 - Authenticates the voter with paper check-in
 - Reduces reliance on the inherent connectivity and technology
 - Eliminates possible attack of bad actors
 - Shush fund

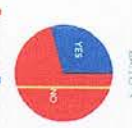


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PROBLEM: MAJORITY COUNTIES DON'T HAVE PAPER (ORE'S)

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COMMITTEE MEMBERS



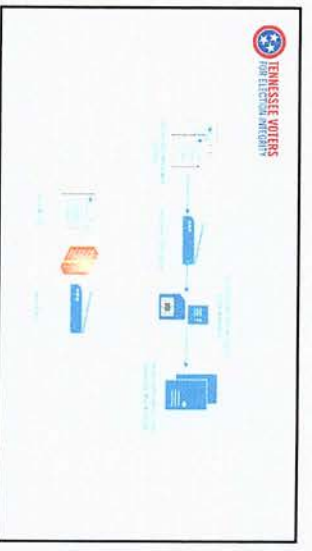
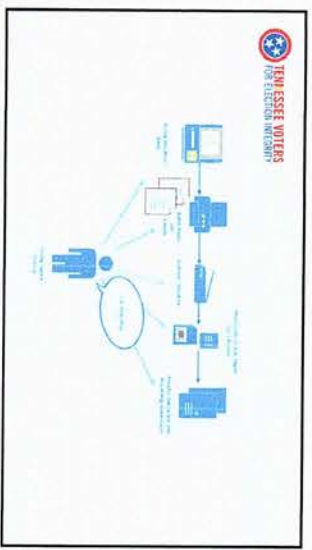
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PROBLEM: WITHOUT HAND-MARKED PAPER BALLOTS, VENDORS CONTROL THE PROCESS.

- Ballot is
 - Entered in many counties using the vendor's paper
 - Printed by the vendor's Ballot Marking Device (BMD)
 - Controlled by the vendor's source code/software
 - Encrypted by the vendor's QR code
 - Scanned by the vendor's tabulator
 - Tracked by the vendor's Election Management System (EMS)
- Steps of the voting process, should be **standardized** and **not** **run** **any**

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PROBLEM: CAN'T CONFIRM YOUR VOTE - BMD OR CODE



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SOLUTION: AUTHENTICATED HAND-MARKED PAPER BALLOTS.

- Ballot read-ers should be chosen by state, not vendors.
- A2 Rep. Mark Finchem ballot initiative, 37 other states currently interested
- Authentic Worldwide currency/fuel/pharmaceutical/airline products
- Ballot characteristics
 - Embed added security, QR tags, visible/irvisible = U.S. currency
 - Watermarked, holograms, microprint 'g'
 - Unique, randomized 12 bit
- Ensures links, it's possible if nation's produced as election
- Provides voter secure ID without a voter service center
- Defines to ensure vote tabulated where we want.

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Secure Micro Paper

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SOLUTION: AUTHENTICATED HAND-MARKED PAPER BALLOTS.

- **Transparent and cost-effective.**
- Eliminates BMD and contractor-run machines.
- Hand-marked, optical tabulator, self adjudication
 - Leverage ID allows voter to check ballot online
 - Emailed but not counted more than once
- Cost: \$0.25 per ballot (per 3 million)



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SOLUTION: TABULATOR.

- Tabulator
- Should outstrip Security Scan Evaluator
- Tabulator vendor should be separate from ballot vendor.
- Firewall between the two for security
- ADA accommodation
- Assist handicapped precinct voters in same manner as come in a nursing home or other off-site facility.



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PROBLEM: BACK DOOR WEAK AUDIT.

- It is the 1/3 of the process in less than 1/3 of the counties in Tennessee.
- Yields false election confidence. Should be end-to-end.
- What is an end-to-end audit? Three segments:
 - Voter intention -> vote cast: Ballot scan code represent voter's vote?
 - Vote cast -> vote count: Tabulator correctly record count the ballot?
 - Vote count -> the tally: Report system correctly tally tabulator votes?
- Only 1/3 of Tennessee counties?
- Only 28 counties produce paper ballots able to be audited

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SOLUTION: BACK DOOR AN ENHANCED AUDIT.

- Mandatory post-election, enhanced audit of paper ballots to substantiate the machine count and verify that the winner lost
- Standard: random sample, hand-count, end-to-end
- Unbiased randomization in process on basis supports the audit
- 50+% confidence with few hand-counted ballots in small margin race
- Under in process



TENNESSEE VOTERS FOR ELECTION INTEGRITY

SOLUTION: BACK DOOR PAPER BALLOTS AND ENHANCED AUDIT.

- Experts agree with this step.
- J Alex Halderman, professor, computer science, engineering, UoM
- DefCon 25 presentation in 2018




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SOLUTION: BACK DOOR OPERATIONAL AUDIT

- Evaluates the performance of election EOI vendors, opens new, untested
- Checks the compliance of various municipalities, from security specs,
- 20% of Tennessee counties audited annually, over five-year period
- Independent audits
- Together, both audits address all recommendations from the National Association of Secretaries of State (NAASS)



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PROBLEM: VOTING MACHINES CAN BE HACKED.

- Foundation of voter concerns
- Experts agree assessing the machinery must be done



TENNESSEE VOTERS FOR ELECTION INTEGRITY

PROBLEM: MACHINE CERTIFICATION PROCESS WEAK.

- Election Assistance Commission (EAC) in place 18 years
- EAC has no track record in state, accurate
- None of brands in TN certified beyond 2005 VWSG (VWSG 11) (VWSG 20)
- First smartphone launched in 2007
- With no public debate, EAC in control, approval 1.5 machine, citizens responsible
- TN machine not vulnerable they machine audit is done and all was available
- Network control box in machines - Board member Stark quit
- Melissa Bowen is a conflict of interest (10-year Dominion/SEC/Wico)

TENNESSEE VOTERS FOR ELECTION INTEGRITY


PROBLEM: MACHINE CERTIFICATION PROCESS WEAK.

- How are machines tested, certified?
- State One: No voters, first three weeks, no 2007, standards
- State Two: No 100 System, no long, last VSTI checks vs 2015 standards
- State Three: EAC certifies, no at VSTI, check it
- State Four: Tennessee Election Commission, accurate EAC, verification
- Only 2 accredited VSTIs for certifications, Privox, Universal VeriSafe



PROBLEM: BACK DOOR PER MANUAL: RESULTS TALLY & REPORTING (RTRI) SYSTEM

- Can allow chain of custody and downgrades
- No due-diligence authentication required.
- Reports can be published to Public transfer points
- Referring a database to database in the internet
- Remote clients can communicate with server via Dominion
- Again identifying a data link connection.
- No certificate on from vendor. TN Confidential of Elections WCEC Election Office has verified




SOLUTION: SECURITY RISK EVALUATION.

- SEC subcommittee has submitted to identify all brands
- Security Risk Evaluation – versus identification – of all brands of technology from voting and registration state of precinct
- We've developed a process, shared with State Election Commission
- Involve committee of the Chairperson if Cybersecurity and internet conflicts experts to check the machinery.



IN SUMMARY




WHAT CITIZENS WANT IN THIS ELECTION INTEGRITY MODEL.

- More secure & comprehensive voting model with less technology
- Voter calls. Protect them more
- Precinct election. No voting centers, no other check-in
- Paper ballots. Hand marked, random O, watermark, no BY/D/ONES
- Count. Hand count or secure separate vendor (ballot) to load ballots
- Extra cost audit. Post-election, end 2-end validation of the electronic vote count to affirm the winner
- Operational Audit. Annual state audit of county election commissions
- Chain of custody. Ballot/precinct/county/state bank, physical accountability
- Secure by Risk Evaluation vs. certification



WHY ITS WANTED BY CITIZENS.

- Every voter wants to know that their vote could be
- That the election was fair and honest and
- That the results truly represented the will of the people, whatever that may be
- There are holes in our system preventing the clear outcome
- Tennessee needs to make these holes to better maintain election integrity



WHAT YOU CAN DO.

- Ballot tabulation with local election commission and state level results
- Voters call em all let them know your concerns
- State the issues
- Advocate for stack of voter roll integrity, hand-marked paper ballot vendor, separate from tabulation vendor, eliminate voting centers, \$ million to precinct voting equipment sale and report audits, voter.gov, voting
- Let them know As security is not important in conventions
- Get involved. Post worker, poll watcher, precinct chair
- Get it interesting. Learn voting systems, read past minutes, voice concerns

