



WILLIAMSON COUNTY VOTERS FOR ELECTION INTEGRITY

Ensuring Election Integrity for Tennessee Voters

April 2, 2021



"BRING ME YOUR SOLUTIONS... NOT JUST YOUR PROBLEMS."

- Who we are and why we are here
- Our research on election integrity
- E-voting, absentee/ballot boxes
- Best Practice solutions
- Additional details and back-up support available



WHO WE ARE

- Williamson County voters wanting to ensure elections are transparent, trustworthy and fair
- Long-term residents, business/homeowners, active voters, job workers
- Represent other Williamson County groups, residents



THE ISSUE THAT BROUGHT US TOGETHER

- Credible, widespread allegations of voter fraud nationwide
- Voting machine irregularities, statistical anomalies, vote Dominion
- Ballot abnormalities and voting process flaws
- Nullification of legislatures and voting laws
- Courts have declined to look at issues
- Campaigning by Big Tech and the media
- Voter confidence in election integrity everywhere significantly damaged



WHAT WE'VE DONE

- Review of reports, documents, affidavits, data inversions, documents, Dominion user manuals, other sources
- Interviewed poll workers
- Met with officials and operators, attended open meetings
- Our conclusions
 - Numerous opportunities for fraud/abuse exist due to holes in the Dominion system
 - Dominion is a damaged brand for all our local
 - TN law enables election confidence equal to audit (TCA 2-20-103)
 - Stakeholder interventions legislation needed to restore confidence



**FIRST RECOMMENDATION:
ELIMINATE ELECTRONIC VOTING MACHINE VULNERABILITIES VS. SIMPLE RECERTIFICATION**



ELECTRONIC VOTING MACHINE VULNERABILITIES

- Our findings, validated by Congressional testimony:
 - J. Alex Halderman
 - University of Michigan professor, Computer Science, Engineering
 - Director, Center for Computer Security & Society Election Integrity
- 2017 Halderman Senate testimony
<https://www.youtube.com/watch?v=2d07h5d4/OJ>



ELECTRONIC VOTING MACHINE VULNERABILITIES

- Abstracts of summaries:
 - 2012 Course vito: Security Digital Democracy: How hack machines,
 - 2016 Fox News One line code gave access to online voting
 - 2018 KYTimes I hacked an election, so can the Russians
 - 2018 Scientific American Vulnerability of our voting machines
 - 2019 CSpan Washington Journal Election Vulnerability
 - 2019 New York Review How voting machines hack Democracy
 - 2020 Wired 12 cyber threats could weak havoc on the election
 - 2020 The World Electronic voting machines put at risk
 - 2020 Democratic "Kill Chain: The Cyberwar on America's Elections "



"THE THING THAT KEEPS ME UP AT NIGHT..."

- Expert presentations -- ability to hack machines -- have confirmed our findings of vulnerabilities.
 - 2018 DecCon '28 Two day-deciding hacking conference
- Clips of DecCon presentation
 after hacking a machine so audience understands issue
<https://www.youtube.com/watch?v=4KQY2Zcb2nc>



ELECTRONIC VOTING MACHINE VULNERABILITIES

Halderman's insights about machine vulnerabilities did NOT evaporate once the 2020 election was over.

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WHAT WILL A SECURITY RISK AUDIT ACHIEVE?

- Provide insights and about machine/software capabilities and security, to help you make informed decisions for the software, vendor system(s) and processes that should be approved for the state or use
- Security Risk Audit must be the central decision point on releasing or adding any election machine vendor
- Recommend to the public to ensure confidence in TEC's diligence and selection

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**SECOND RECOMMENDATION:
PAPER BALLOTS AND MANDATORY RISK LIMITING AUDITS
TO BUILD BACK VOTER PROTECTIONS AND CREDIBILITY**

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EXPERTS: PAPER BALLOTS AND RISK LIMITING AUDITS

- Election experts and logic stand behind this recommendation

Another few clips of DieCon presentation
About importance of paper ballots and risk limiting audits
<https://www.youtube.com/watch?v=4p-0VZ2sbhc>



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EXPERTS: PAPER BALLOTS

- Tennessee problem: No paper ballot counties surpasses paper-ballot counties

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EXPERTS: PAPER BALLOTS

COUNTIES WITH LOW CRITERIA BALLOTS

FROM THE VIDEO THE

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EXPERTS: PAPER BALLOTS

PLURISTRONG VOTERS: 2022-4

▲ 39%
VOTERS IN TN USE PAPER BALLOTS
▼ 61%
VOTERS IN TN USE ELECTION MACHINES

▼ 41%
VOTERS IN TN USE PAPER BALLOTS
▲ 59%
VOTERS IN TN USE ELECTION MACHINES

Source: Williamson County Election Board

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EXPERTS: PAPER BALLOTS

- Paper ballots a must
 - For a voter to see and check their vote
- EBE/Direct Election/Election without VVPAT as a backup
- Our data says no DPES in Tennessee have adopted VVPAT
 - 99% Tennessee have no paper ballot to check vote
 - Should voter ballots and login the safe storage of voting machine
 - SECURE: ACCESS TO THE SYSTEMS? STRENGTH
 - Temporary solutions? Add printers to the DPES

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EXPERTS: RISK LIMITING AUDITS

- Available audit to check election standards
- Mandatory post-election statistical inspection sample either ballot based counted
- Risk Limiting Audit
 - Identify need for study into potential misbehaving software, switched votes
 - Only 1% random sample yields high confidence of election correctness
 - End-to-end functions, not just tabulator for BMDs
 - Raised percent for top race close margins
 - Overconfidence? Repeat, exclude sample size
 - Lower cost for county to implement
 - This solution is a process
 - WCEC, TACEO support Senator Johnson to meet, TEC support?

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THIRD RECOMMENDATION:

ENSURE ISSUES WITH THE DOMINION MACHINE AND VOTING PROCESS ARE REPLACED WITH BEST PRACTICES

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BEST PRACTICE SOLUTIONS

- Our group, drive in Williamson County revealed disturbing aspects
- Awaiting answers to questions from Williamson Co Election Commission
- Many Williamson County issues common with other Tennessee counties
 - Process solutions
 - Technological solutions
 - Legislative solutions

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BEST PRACTICE SOLUTIONS: TECHNOLOGICAL

- Existing dedicated, encrypted physical network for voter reliability system
- Disk encryption must be verified
- Add system log, alarm to warn of ethernet traffic, esp. outside system
- No DNS/dynamic/dynamic changes allowed for 90 days prior to election
 - All changes tested and certified before adoption
- Data access to files within the system demonstrated into network
- Run software verification hash prior to after day's vote occurrence



BEST PRACTICE SOLUTIONS: TECHNOLOGICAL

- Responses managed by users & required change on first login and if password is changed
- All printed reports directly from election software, not through third-party print-out
- Require login for dual-path poll workers, observers at all stages
- Microsoft Internet logs enabled, security/system events active; not disabled
- All system users should have separate UIDs, forced password changes
- Unencrypted paper-based QR Codes



BEST PRACTICE SOLUTIONS: PROCESS

- Develop a Required Voting System Specification (RVSS) managed by VVSG 2.0 to Terminate software selection and certification process
- Look at other state evaluations to compare, understand, integrate
- "Quality election officials must ensure sufficient 'resource staff' is trained to operate election system fully, without involvement of machine vendor"
- Require dual-party poll workers at key junctions of poll and tabulation procedures
- Protections to ensure ease for dual-party observers



BEST PRACTICE SOLUTIONS: PROCESS

- Publicly streamed video in polling/provisional processing areas
- Formally specify and document the process for authenticating address
- Require printed zero & status reports at start, finish each voting period
- Independent verification of accurate number of voters to risk level of certification
- Appropriate chain of custody a must, audited prior to voting certification
- 800 number to report election issues throughout term/essence



BEST PRACTICE SOLUTIONS: LEGISLATIVE

- **Each voting system must undergo a 90-day SOB**
- Require mandatory audit of just tabulators in Voter Confidence Act (VCA 2.0C) process & mandatory random sampling, third-party Risk Limiting Audit of all processes
- Appropriately clean voting rolls, require appropriate resources beyond bases
- US Postal Service National Campaign of Address (NCA) System
- E-Mail, DMV, Social Security's Master Data File
- Clearly tax records, residence via commercial address, not a residential address developed for residential use
- All software configurations dictated by the state to ensure consistency, not



BEST PRACTICE SOLUTIONS: LEGISLATIVE

- No substantiation of or vendor, employees, working election processes
- Take critical steps regarding legislative bills
- Limit to valid excuses, require validated witnesses
- Reviewed by election day, nothing after
- Printed on uniform, watermarked paper (archived)
- Aggressively enforce law against, with uniform/habitual, harassing
- Standardize vote certification throughout processes and counties
- **Remember one voting system & device**



3rd PARTY BEST PRACTICE SOLUTIONS

- 25 General Best Practices from national, regional, sources & booklet, including
 - Election law/certifications, call like changed within 180 days, error
 - No automatic voter registration, no drop-vote registration
 - No data bases – ease of tampering, no chain of custody
 - Basic counting combines without paper until all votes tabulating



IN SUMMARY

- Transparent, trustworthy and accurate voting experience desired throughout Tennessee.
- Our research uncovered questions, irregularities, vulnerabilities needing to be addressed to win back citizen confidence.
- Many recommendations are complicated, time-consuming, costly
- But money, time, effort pale compared to enormity at stake
- Protect as a most sacred gift... voice as Americans... right to vote and have it properly registered.
- And TRUST that occurs every time.



IN SUMMARY

- We speak for thousands of Tennesseans
- Help us restore the trust in our elections that has been destroyed by the actions of others
- Tennessee can be the model of election integrity for the nation
- And you can drive that!



IN SUMMARY

- Critical
- Put all 5 machine brands under Security Risk Audit (vs simple recertification) to regain lost citizen confidence in our election equipment and elections.
- Secure paper ballots especially with DRES.
- Risk Limiting Audits for all elections, all counties, end 2-yrnd.
- Standardized voting system/process.



IN SUMMARY

- Follow-up:
- Tighten the machine/voting process in Williamson County.
- Ensure vendors are not running our elections.



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