PRESS RELEASE & MEDIA ADVISORY
FOR IMMEDIATE RELEASE

Independent Audit of 2020 Election in Fulton GA, Bartow GA, and Dane WI Supports Election Outcome but Finds Strange Quirks

All available ballot images were parsed and compared with the official report, auditing all contests

AuditEngine "Reads" verifiable text on Touch-Screen Ballots and confirms the QR/barcodes are not hacked

MEDIA ADVISORY
VIRTUAL PRESS CONFERENCE AND AUDIT REPORT PRESENTATION
WHEN: OCT 12, 2022, 2pm ET, 11am PT
WHERE: ZOOM link: https://us02web.zoom.us/j/5747302646

Audit Reports of 2020 General Election:
Three Counties in GA and WI: https://copswiki.org/Common/M1986
Three FL Counties: https://auditengine.org/audit-results/case-study/

SAN DIEGO, CA (2022-09-30) -- Citizens' Oversight, an organization that performs independent audits of elections using the cloud-based auditing platform "AuditEngine" will conduct a virtual press conference on Wednesday Oct 12 at 2pm ET, 11am PT. (Please note the delay due to the weather event.)

Three new audit reports of Bartow County GA, Fulton County GA, and Dane County WI are now available. These are audits of the 2020 General Election and they are combined
with three earlier audits of Volusia County FL, Collier County FL, and Port St. Lucie County FL, which also confirmed consistency of the results.

The AuditEngine service provides a forensic "Ballot Image Audit" where all ballot images produced by the voting system are independently processed to interpret the votes, and then compared ballot-by-ballot and contest-by-contest with the official result.

Ray Lutz, Executive Director of Citizens Oversight and the technical lead on the project explained. "We started this project in 2019 after seeing no good way to audit elections other than self-run audits by the election officials themselves. Ballot Images are the first set of data from the election and if analyzed, can detect almost all opportunistic hacks. Many voters still have a hard time accepting the results of the prior election. By looking at every ballot and comparing one-by-one with the official results, we can turn the black box into a transparent box, potentially find hacks and mistakes, and contribute to voter confidence in the results."

AuditEngine processed all 50,678 ballots cast in Bartow County GA, 148,318 ballot images out of 528,777 ballots cast in Fulton County GA (that's 28% of the ballots cast as the others were inadvertently deleted before AuditEngine received them), and 344,347 ballot images in Dane County WI. AuditEngine independently evaluated the vote on all ballots, and "read" the human-readable, verifiable text summary on every touch-screen generated ballot, and then compared these with the official results.

AuditEngine found no evidence that the election outcome was incorrect, but it did find a few quirks in how the election departments process the ballots, and obviously it would be nice to have the other 380,458 original ballot images in Fulton County GA that were deleted.

A few of the findings by AuditEngine and the auditing team were generally consistent across the counties audited:

- About 99.95% of all votes had no disagreements between the official election machines and AuditEngine. The other 0.05% in Bartow and Fulton counties were found by staff in normal processing, were adjudicated, and were virtually all correct in the final official results.

- About 1% of all votes were variants: write-ins, overvotes, disagreements, or AuditEngine found ambiguous marks. Write-ins and overvotes can be misinterpreted by machines, so in a close contest these are all worth examining. In every contest, these accounted for less than 8% of the margin of victory of that contest in that county.
• About 75% or more of the disagreements were correctly evaluated by AuditEngine while these were initially incorrectly evaluated by the official election machines. However, in Bartow and Fulton Counties, these were largely adjudicated correctly by the election staff.

• When the contests were individually reviewed, the maximum disagreements amount to typically less than 1% of the margin of victory, while all variants, including all write-ins, overvotes, and gray-flags (ambiguous marks), account for less than 8% of the margin of victory.

• The Presidential Contest was scrutinized with additional care and compared with the narrow statewide margin in both WI and GA:

<table>
<thead>
<tr>
<th>County</th>
<th>statewide margin</th>
<th>variants</th>
<th>disagreements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dane County WI</td>
<td>20,682 (0.63%)</td>
<td>1,394</td>
<td>30</td>
</tr>
<tr>
<td>Fulton County GA</td>
<td>11,779 (0.23%)</td>
<td>927</td>
<td>82</td>
</tr>
<tr>
<td>Bartow County GA</td>
<td>11,779 (0.23%)</td>
<td>160</td>
<td>10</td>
</tr>
</tbody>
</table>

It is important to note that the variants are all agreed between the voting system and AuditEngine except for the disagreements. The disagreements, when resolved, could benefit the reported winner or loser. In Fulton and Bartow County, the disagreements were all resolved through adjudication in this contest.

If all 159 counties in GA had 74 uncorrected errors by the official election machines in this contest, and if they all benefited the reported loser when resolved, then the outcome could be cast into doubt. In our review the disagreements usually were beneficial to the reported winner, or would not change the margin (disagreements about write-ins, for example). Both Bartow and Fulton County adjudicated most or all of the ballots in this category. If other counties did so too, there are too few disagreements left to affect the outcome. The missing 72% of ballots in Fulton County are unknown. To be fair, however, all ballots were hand counted, and that count should have detected errors if present.

This audit shows that the outcome is consistent with the ballot image data.
There were also a few quirks specific to each county

- Fulton County had 5 ballots from the adjacent DeKalb county and 5 ballots from the primary election earlier in the year. The primary ballots were imaged even though those ballots were a different length physically.

- Bartow County GA was the cleanest of the three, with all ballot images available and only very few issues of note.

- Dane County had a number of ballots images withheld or repeated and CVR records withheld or repeated, making the set of records a challenge to understand. We hope that in the future these differences can be avoided or minimized.

Lutz said, "Our goal is to audit all elections, all districts, all contests, and all ballots with 0% sampling risk. AuditEngine reviews every contest on every ballot, 100% of ballots, rather than a tiny fraction of ballots reviewed in statistical audits. Thus the risk due to sampling, which is commonly set to 5% or 10% in Risk-limiting audits, is 0% in these audits, if we are able to include all the ballot images in our review."

QR/barcode Ballots were Checked with Zero Discrepancies

AuditEngine also processed the barcode ballots created on Ballot Marking Devices (BMDs) by reading the voter-verifiable text rather than the barcodes, and confirmed that there were zero discrepancies between the data produced by the text (among the ballot images available) and the official result, with almost all ballots processed automatically. In these contests, AuditEngine provides assurance that the official result is the same as the voter’s intent.

Recently, J. Alex Halderman of the University of Michigan produced a "secret report" where he identified issues with Dominion equipment including a long-recognized vulnerability where the QR code may have one vote while the verifiable text may say something else\(^1\). We agree that this is a real vulnerability, and are happy to report that AuditEngine is guaranteed to detect such a hack, as long as the voter-verifiable text reflects the vote cast by the voter.

Thus, districts using BMD machines should educate voters to check that the votes listed on the ballot summary sheet matches their intent before they cast the ballot.

AuditEngine can detect any variation or programming mistakes in the QR Codes even better than any sampling audit, such as a "risk limiting audit" (RLA) which may miss those altered ballots.

Recently, the May 24, 2022 election in DeKalb County GA had "computer programming error" which was caught only by a disgruntled candidate\(^2\).

Citizens' Oversight has already ordered the ballot images and other records so a complete ballot image audit can be performed for that DeKalb election. "They say the error was isolated to this one contest but we'd rather see it for ourselves," Lutz said. "This will be a great demonstration of AuditEngine because there is a chance other contests were also affected, and they only hand-counted one contest."

"These three audits clearly demonstrate the value of ballot image audits because they exhaustively examine every ballot and every oval completed by the voters, as well as the human-verifiable text on electronic Ballot Marking Device (BMD) ballots," continued Lutz. "AuditEngine uses an advanced *adaptive thresholding* algorithm and AI to evaluate voter intent, doing at least three times better than the voting machines in those cases where they disagree. We agree with Alex Halderman that the QR Code could be altered to differ with the human-readable text, and now, we have AuditEngine. AuditEngine will detect that issue."

Citizens' Oversight has been engaged in providing oversight of elections for the past 15 years, particularly starting in California, but also including Wisconsin, Florida, Georgia and other areas.

**AuditEngine Now Available for Forensic Audits by Oversight Groups**
The primary usage model of AuditEngine is for it to be used by the general public to turn the black box into a transparent box. Oversight groups, candidates and campaigns as well as election officials can use AuditEngine to check the results and improve voter confidence.

For more information, please contact:
Raymond Lutz, Executive Director -- Citizens’ Oversight Projects
support@citizensoversight.org
www.CitizensOversight.org
(619) 693-8960

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\(^2\) [https://www.nytimes.com/2022/06/06/us/politics/michelle-long-spears-georgia.html](https://www.nytimes.com/2022/06/06/us/politics/michelle-long-spears-georgia.html) -- "A candidate in Georgia who appeared to get few Election Day votes was actually in first place."