

# BRANDON HURLEY

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August 9, 2008

Mr. Keith Ingram  
Director of Elections  
Texas Secretary of State  
Elections Division  
208 East 10th Street  
Austin, Texas 78711

Re: Inspection of the ES&S 5.2.4 System conducted on July 10, 2018

Dear Mr. Ingram:

Pursuant to my appointment by the Texas Secretary of State as a voting systems examiner under TEXAS ELECTION CODE § 122.035, please allow this letter to serve as my report concerning the above referenced examination. I, along with the other statutory examiners and staff from the Secretary of State's office, examined the ES&S EVS 5.2.4 voting system on July 10, 2018, at the offices of Elections Division of the Texas Secretary of State in Austin, Texas.

I examined the above referenced software and equipment and accompanying written materials (referred to herein as "**the ES&S 5.2.4 System**") for compliance with the relevant provisions of the TEXAS ELECTION CODE and Texas Administrative Code related to the requirements for election machines and software.

At the outset, it should be noted that the ES&S 5.2.4 System contains many of the same components and software as the previous ES&S Systems that have been certified by the Secretary of State. The limited changes in the 5.2.4 System relate to changes in "end-of-life" hardware and software included in the ES&S 5.2.2 System that is being used in many counties in Texas.<sup>1</sup> For that reason, the inspection and this report are limited to the new components in the ES&S 5.2.4 System that include new Electionware and ExpressVote components of the systems as well as minor modifications in some of the audio prompts and materials used for accessibility components of the System.

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<sup>1</sup> It should be noted that a "5.2.3" system does exist, but ES&S never sought certification of that System in Texas.

## **ACCESSIBILITY TESTING**

Before the day of inspection, staff from the Secretary of State's office tested the physical equipment of the ES&S 5.2.4 System for accessibility compliance with the applicable state laws and regulations. These tests confirmed that the new components of the accessibility items in the ES&S 5.2.4 System complied with the accessibility requirements of Texas law.

## **TESTING OF HARDWARE AND SOFTWARE**

Unlike previous exams, ES&S completed the loading and installation of the ES&S 5.2.4 System on the same day as the examiners' inspection and testing of the System. Similarly, the ES&S officials ran the Logic and Accuracy tests and calibrated the scanners to be used in the inspection before any testing or inspection of the equipment and software.

After these set-up procedures were completed, ES&S officials gave an overview of the new ES&S 5.2.4 System and explained the need for the changes from the 5.2.2 System. The examiners then conducted a physical inspection and testing of each piece of equipment and software. In so doing, the examiners and staff cast a script of ballots on each voting machine and paper ballots were fed into the optical scanners. The mock votes were tabulated and sorted with the ES&S 5.2.4 software.

After the voting portion of the testing was complete, the examiners and staff reviewed the audit logs and reports generated as a result of the voting.

## **OBSERVATIONS**

1. Each of the separate pieces of hardware and software examined met the listed requirements of the TEXAS ELECTION CODE and TEXAS ADMINISTRATIVE CODE.
2. In light of the recent Attorney General's opinion on how ballot marking machines may qualify as a Direct Recording Electronic Voting Machine ("DRE") under Texas law, the devices in the ES&S 5.2.4 System that generate a marked ballot that is then fed into an optical scanner could be construed as a DRE under Texas law. These devices in the ES&S 5.2.4 system meet all of the requirements for a DRE in Chapter 129 of the TEXAS ELECTION CODE and applicable provisions of the TEXAS ADMINISTRATIVE CODE.
3. All machines in the ES&S 5.2.4 System cannot be connected to an internet or online portal nor can they be accessed wirelessly, making the individual machine's internal data, storage and programs accessible only by someone with the proper keys and passwords. However, the election management and tabulation software for the ES&S 5.2.4 System can be loaded on a computer used for other purposes that does allow for portals to the internet.

4. While I believe the audit log functions comply with Texas law, I noted that the ability to make use of the logs for to discover discrepancies or investigations into election disputes will be difficult because there is no “flagging” of anomalies or missed steps in an election set-up. At the hardware level, the logs can also only be printed and not exported to a searchable database. At the Electionware level, the logs are exportable. My concern is that the logs, even if exported to a searchable database or spreadsheet, are not practically beneficial to the entities conducting elections because the logs cannot effectively be reviewed for general election anomalies or mistakes because of the sheer volume of information contained in a log that documents an entire election. Instead, these logs will only become practical to use if someone can pinpoint an issue and then find the portion in the log where that event occurred.

### **RECOMMENDATION**

Based on the foregoing observations and my examination of the ES&S 5.2.4 System, its accompanying literature and the representations made by ES&S officials both in its literature and at the examination, I recommend that the ES&S 5.2.4 System be certified as compliant with the requirements of the TEXAS ELECTION CODE and the TEXAS ADMINISTRATIVE CODE.

This report should not be construed as a tacit or implied comment on any of the technical aspects of the ES&S 5.2.4 System except as expressly stated herein. In the event any of the equipment, software or security devices examined are altered, changed or decertified by any accrediting agency (other than a “minor modification qualified for administrative certification process” as that term is defined in § 81.65 of the Texas Administrative Code), this report should be considered withdrawn.

Thank you for the opportunity to serve as an examiner and participate in this important process that protects the integrity of Texas’ voting systems.

Sincerely,

  
Brandon T. Hurley