

BRANDON HURLEY, ESQ.

4122 Mapleridge Drive
Grapevine, Texas 76051
(817) 454-3142
brandon.hurley@outlook.com

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

Re: Inspection of the Dominion Voting Systems' Democracy Suite 5.5-A conducted on October 2 and 3, 2019

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 Democracy Suite 5.5-A voting system presented by Dominion Voting Systems ("**Democracy 5.5-A System**") on October 2 and 3, 2019, at the offices of Elections Division of the Texas Secretary of State in Austin, Texas.

At the outset, it should be noted that the Democracy 5.5-A System is a derivation of the 5.5 System that Dominion previously submitted for examination in February of 2019. The examiners reports (including mine) pointed out multiple concerns with the 5.5 System. Dominion officials made clear that the only substantive change to the 5.5-A System from the 5.5 System was a change in the wording of the straight ticket voting language that has been one of the points raised in the examiners previous reports. Dominion expressed that other issues raised in the examiners' previous reports were a result of potentially damaged equipment, misunderstandings between the examiners and the previous Dominion officials that presented the 5.5 System and things that could not be explained since the Dominion presenters of the 5.5-A System were not present at the 5.5 System examination. ***It should be noted that Dominion removed the DRE device that was included in the 5.5 System from the 5.5-A System.***

I reviewed the written materials for the 5.5-A System before the October examination. These documents appear to be substantially similar to the documentation for the 5.5 System. As was the case with the 5.5 System documents, Dominion submitted updated versions of some of the documents before the examination.

Although I was not present on the first day of the examination when the 5.5-A System was built and installed, it appears Dominion had difficulties accomplishing the task. As a result, Dominion officials had to re-install the operating system on some of its equipment and ran into difficulties in getting the build completed.

At the beginning of the second day of the examination, the vendor provided a general overview of the Democracy 5.5-A System. It is a complete voting system that includes ballot marking devices, ballot scanners, election tabulation and management software and supporting devices for accessibility needs. The 5.5-A System does not include a DRE device. The primary hardware and software components of the 5.5-A System are the same as the previously reviewed 5.5 System.

ACCESSIBILITY TESTING

Officials from the Secretary of State's office tested the physical equipment of the Democracy 5.5-A System for accessibility compliance with the applicable state laws and regulations. These tests confirmed that the new components in the Democracy 5.5-A System complied with the accessibility requirements of Texas law; however, officials from the Secretary's office noted that while using the non-audio voting portion of the system (i.e.- reading items on a screen), only audio instructions were available and no written instructions were on the screen. This raises issues with voters that want written instructions on the screen as part of their voting experience. This same problem existed with the 5.5 System.

TESTING OF HARDWARE AND SOFTWARE

On October 3rd, the examiners and Secretary of State staff tested each piece of equipment and software for security, functionality and accuracy. The examiners and staff cast a script of ballots on each voting machine and paper ballots were fed into the optical scanners that were marked by the ICX being used as a ballot marking n device and hand-marked ballots. The mock votes were tabulated and sorted with the election software included in the Democracy 5.5-A System.

SPECIFIC ISSUES RAISED DURING THE INSPECTION

1. As was the case with THE 5.5 System, some of the hardware in the Democracy 5.5-A System can be connected to the internet through Ethernet ports.
2. The foldable ballot box offered with the Democracy 5.5 System could now be used in early voting because Dominion has developed a process to add a second lock to it that would mean two separate keyed locks would secure the box as required by Texas law.
3. In the 5.5 System examination, the rolling ballot box dividers for provisional or disputed ballot storage were not present. At that time, the vendor claimed such dividers were available. However, at the October examination of the 5.5-A System, Dominion officials explained that there was not a separate divider or

location within the ballot box for provisional ballots, so those ballots would need to be segregated in a separate envelope at the polling location.

4. Tamper seals and locks exist on the equipment; however, Dominion officials stated that the end-user (i.e. - Texas counties and other voting jurisdictions) had to implement procedures to make sure these security measures were effective.
5. As several questions arose during the examination, Dominion officials referred to a “best practices” document that was not part of the documentation provided to the examiners. Dominion officials claimed that the majority of the security concerns raised by the examiners were addressed by this document, but it was ultimately the responsibility of the end-users to make decisions and implement security measures they deemed appropriate.
6. Although more appropriate for the technical examiners to address, the server and other portions of the hardware and software used by the Dominion officials during the exam were not part of the equipment/programs listed in the certification application. However, it appears that these items may be necessary for a complete system that would be sold to Texas election end-users. This creates a conundrum concerning exactly what is being certified and what is being sold.
7. As was the case with the 5.5 System, the use of non-sequential numbered paper ballots as required by the Texas Constitution cannot be created within the Democracy 5.5-A System. Instead, the only way to comply with this requirement of the law would be to hand-write and/or pre-print paper with serial numbers in a range for the selected precinct and then manually intermingle the ballots so their numbers are not sequential.
8. The problems with the adjudication portion of the tabulation process in the 5.5 System were dismissed by Dominion officials as a “bad path”; however, Dominion never showed why the bad path occurred or how it could be avoided end users. Also, the previous poor resolution on the scanner for some of the printed wording on the ballots was dismissed either as damaged equipment or a setting issue.

GENERAL OBSERVATIONS

- A. While the previous examination of the 5.5 System and the current examination of the 5.5-A System are separate and distinct, it is clear that the two systems overlap in the sense that the issues with the 5.5 System should be addressed (or at least adequately explained) in the 5.5-A System examination. I do not think this was completely done. Dominion officials dismissed several questions from the previous examination that were once again raised at the 5.5-A System examination by stating “since we were not at the previous

inspection, I am not sure I can speak to that issue.” Several of these issues were of critical concern.

- B. The build and installation process problems suggest that the 5.5-A System is complicated and may not be easily built and installed by the end-users. There was a discussion of purchased the 5.5-A System already installed; however, that was not demonstrated to the examiners and, as presented, the on-site installation would be required. The problems encountered by Dominion staff indicate that the same problems may occur in the field. This leads to the potential conclusion that the 5.5-A System is may not be suitable for its intended purpose.
- C. Without question, one or more of the components of the 5.5-A System can be connected to an external communication network and this can only be avoided if the end-user takes the proper precautions to prevent such a connection.
- D. Many of the security features of the 5.5-A System are not automatic, but again depend on the end-user following the best practices promoted by Dominion. I believe that Texas law requires safety measures that protects against fraud or unauthorized manipulation that provides the best possible protection. In my opinion, leaving these security measures to the local jurisdiction is not in alignment with this standard.
- E. As with the 5.5 System, The issues identified above could be corrected, but those corrections should be made and the System represented before the hardware and software components can be recommended for certification.

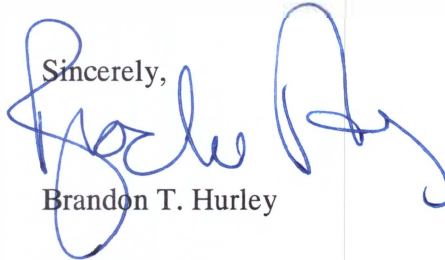
RECOMMENDATION

Based on the foregoing observations and my examination of the Democracy 5.5-A System, its accompanying literature and the presentation made by Dominion officials both in its literature and at the examination, I cannot recommend that the Democracy 5.5-A System be certified as compliant with the requirements of the TEXAS ELECTION CODE and the TEXAS ADMINISTRATIVE CODE. While the applicable code and statutes provide that “conditions” can be suggested as a prerequisite to certification, I do not believe that the listing of conditions that need to be addressed with the 5.5-A System would be appropriate since the conditions, if listed, would require such a substantial re-work of the 5.5-A System that it would not be practical.

This report should not be construed as a tacit or implied comment on any of the technical aspects of the Democracy 5.5-A 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 ensures robust and safe voting systems in the State of Texas.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brandon T. Hurley", written in a cursive style.

Brandon T. Hurley