

# KELLY HART

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December 15, 2015

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

**VIA EMAIL**

Re: Inspection of Hart InterCivic Verity 1.0 System Application on September 23 & 24, 2015

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 Hart InterCivic Verity 1.0 voting system on September 23<sup>rd</sup> and 24<sup>th</sup> of 2015, at the offices of Elections Division of the Texas Secretary of State in Austin, Texas.

We examined the above referenced software and equipment (collectively referred to herein as "the Verity 1.0 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. I also reviewed the written materials submitted by Hart for compliance with the TEXAS ELECTION CODE and Texas Administrative Code requirements for voting equipment.

## **ACCESSIBILITY TESTING**

The examiners and staff tested the physical equipment for the Verity 1.0 System, including different voting terminals and accompanying software for accessibility compliance with the applicable state laws and regulations. All of the equipment and software complied with requirements set out in the applicable statutes and regulations for accessibility for voters with physical disabilities.

## **TESTING OF HARDWARE AND SOFTWARE**

Verity officials provided the examiners with an explanation of the entire system and each of its components. A physical inspection and testing of each piece of equipment was also completed by the examiners and the Secretary of State staff. In so doing, the examiners cast a

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script of paper ballots on each voting machine into the optical scanners. The mock votes were tabulated and sorted with the Verity software.

### OBSERVATIONS

General Compliance with Texas Election Code. Each of the separate pieces of hardware and software examined that were used for actually casting a ballot complied with the requirements listed in §§ 122.001 *et seq.* of the TEXAS ELECTION CODE and the related regulations in Texas Administrative Code

Real-Time Audit Logs with a continuous feed printer. The required audit logs for the central tabulators and related software in the Verity 1.0 System were present for the central tabulation devices used at a central count location, but there were no real time audit logs that produced a physical record for the precinct scanner devices. The concern is that the precinct scanner devices *could* be used as a central tabulator or an early voting device that is required to have a real-time physical audit log that is physically printed to a continuous feed printer.

Internal Audit Logs. The internal audit logs of the Verity 1.0 System operated as required; however, there were a few minor concerns with them. First, the logs are signed but not encrypted. Next, they can be changed by a user, but that change would show up as a corruption in the log. This “corruption” presents an additional problem because a user can effectively cover up what was done with an edit of the log and all that would be shown is the corruption itself and not the previous log entry that was altered. This would make a forensic review of the logs largely worthless. While these issues raise concerns, I do not believe it should be basis to withhold certification of the Verity 1.0 System.

vDrive Errors. During the inspection, the examiners discovered that, under certain scenarios, the vDrives used for aggregating scanned ballots would report an error. Further inspection revealed that the error occurred in connection with straight ballot voting and write-in ballots. Based on information provided by Hart, it appears this issue has been resolved and EAC has approved the change in the coding that resolved the issue as *de minimis*.

### CONCLUSION

Based on the examination and review of the materials, it is my opinion that the Verity 1.0 System meets the requirements of Texas law and the applicable administrative rules. In the event the Secretary of State chooses to certify the Verity 1.0 System, I would recommend the following conditions should be placed on the certification:

- The certification of the precinct scanner should be certified only as precinct device and not for use as a central accumulator;
- The certification should encourage Hart to inform the end-users of the potential that audit logs can be corrupted to allow election officials to provide the on-site security they deem appropriate.

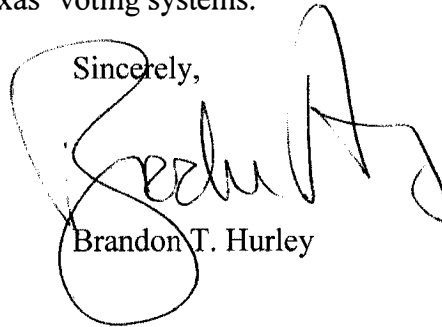
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This report should not be construed as a comment on any of the technical aspects of the Verity 1.0 System except as expressly stated herein. In the event any of the equipment, software or security devices examined are altered, changed or decertified 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,

A handwritten signature in black ink, appearing to read "Brandon T. Hurley". The signature is stylized and cursive, with a large loop at the beginning and a long tail.

Brandon T. Hurley

cc:

Examiners (*via email*)