

The State of Texas



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Secretary of State

MEMORANDUM

TO: Keith Ingram, Director of Elections, Texas Secretary of State

FROM: Chuck Pinney, Staff Attorney, Elections Division, Texas Secretary of State

DATE: June 21, 2019

RE: Hart Intercivic – Verity 2.3 Voting System Examination

In accordance with my appointment by the Texas Secretary of State as a voting system examiner under Tex. Elec. Code §122.067, I present my report on the voting system examination which took place on May 22-23, 2019, in the offices of the Texas Secretary of State at the James E. Rudder Building, 1019 Brazos, Austin, Texas 78701.

On May 22-23, 2019, the examiners appointed by the Texas Secretary of State and the Texas Attorney General examined Verity 2.3, a voting system that was presented by Hart Intercivic (“Hart”) for certification in Texas. The following hardware and software components were examined at the Office of the Secretary of State:¹

Component	Version	Previous Texas Certification Date
Verity Data	2.3.1	12/15/2016
Verity Build	2.3.1	12/15/2016
Verity Count	2.3.1	12/15/2016
Verity Central	2.3.1	12/15/2016
Verity User Management	2.3.1	12/15/2016
Verity Election Management	2.3.1	12/15/2016
Verity Desktop	2.3.1	12/15/2016
Verity Scan	2.3.1	12/15/2016
Verity Touch Writer with Access	2.3.1	12/15/2016

¹ Hart Intercivic also requested certification of Verity Print in their Form 100. However, Verity Print is a ballot-on-demand service. Ballot printing services, including ballot-on-demand, are not considered voting systems within the meaning of the Texas Election Code and do not require a formal certification process. Therefore, the examiners did not consider Verity Print for certification.

Verity Controller	2.3.2	12/15/2016
Verity Touch with Access	2.3.1	12/15/2016
Verity Touch Writer Duo	2.3.1	None

For the reasons outlined below, I recommend that this system be certified by the Texas Secretary of State under Tex. Elec. Code §§122.031 and 122.039.

Background

Hart previously received certification in Texas for the HVS voting system and previous versions of Verity. The most recent version of their software, Verity 2.0, was presented by Hart in June 2016, and was certified in December 2016.

The voting system that was the subject of this examination, Verity 2.3, was certified by the U.S. Election Assistance Commission (“EAC”) on March 15, 2019.

Summary of the Examination

The examination of Verity 2.3 took place on May 22-23, 2019.

The first day of the exam involved the installation of the software and firmware for Verity 2.3 off of the trusted build provided to our office by the testing lab.

At the end of the firmware and software installation on the first day of the exam, I conducted the accessibility testing and tested the visually impaired functions, the sip-and-puff controller, and the paddle controller. The system performed well during the accessibility testing and presented no issues.

The vendor provided a presentation of the software and the updates involved in the current version of Verity. The vendor also presented the Verity Touch Duo, a ballot marking device that has not been previously certified in Texas.

After the vendor presentation, the vendor installed the software and firmware in the presence of the examiners. The examiners then tested the equipment by voting a series of test ballots and comparing the results of those test ballots. The examiners also conducted additional testing on various components of the system to determine if they could generate any issues or errors.

Analysis

The standards for a voting system in Texas are outlined in Texas Election Code Chapter 122. Specifically, the system may only be certified for use in Texas if it satisfies each of an enumerated list of requirements contained in Texas Election Code §122.001. Because the system satisfies each of those requirements, I would recommend that this system be certified.

The Verity Touch Writer Duo is the only piece of hardware that was presented in this examination that had not been previously certified in Texas. The Duo performed well during the examination and did not present any major concerns. The user interface and functionality is similar to other Verity voting machines, but the hardware includes a ballot printer that is built into the structure of the case that houses the tablet. The Duo is not a DRE and does not store any ballots or cast vote records on the system itself, but rather is a ballot marking device that produces a paper record that must be scanned through a ballot scanner. The Duo presents some issues with curbside voting and printing speed that are outlined in more detail below, but in general it is an effective system that complies with Texas law.

Other examiners' reports have gone into greater detail about the various features of Verity 2.3, including its security features, ease of use, and reliability as a system. My conclusions about the positive aspects of the system are similar to those of the other examiners. However, while Verity 2.3 is a very strong product, there are a few issues with the system that are relevant to its use in Texas elections. None of those issues would warrant a denial of certification in my opinion. Those issues are outlined in detail below.

Ballot Numbering

The Texas Election Code establishes a few different ballot numbering requirements in various sections of the Code. Specifically, any ballots used in a Texas election must be (1) numbered consecutively, beginning with the number "1", (2) numbered so that a specific range can be linked to a specific polling place, and (3) must be distributed to voters non-sequentially in order to preserve ballot secrecy. Texas Election Code §§51.006-51.008, 52.062, 62.009.

Verity 2.3 contains no software solution for meeting this ballot numbering requirement. A jurisdiction who uses the Verity 2.3 voting system would be able to comply with these ballot numbering requirements, and accordingly this does not affect my recommendation of certification. However, the approach recommended by the vendor will involve additional costs for counties acquiring the system.

The vendor presented two possible methods of complying with this requirement.

The first method would require jurisdictions to pre-print the required ballot numbering on ballot stock, at which point the jurisdiction could assign ranges of those pre-printed numbers to different polling places. At the polling place, the poll workers would shuffle the ballot stock so that the voter would not receive sequential ballots and the secrecy of that voter's ballot would be preserved.

The second method is similar to the first, except it would require the jurisdiction to use a hand numbering machine instead of pre-printing the ballot stock. The procedure at the polling place would be the same.

Both methods would be sufficient to allow a jurisdiction to use the Verity 2.3 voting system and still comply with the ballot numbering requirement. However, this would require a jurisdiction to pre-print numbers on ballot stock, which may make any remaining ballot stock unusable in

subsequent elections if it was not used in the current election. This means a large amount of additional unused ballot stock would be consumed in each election, requiring the jurisdiction to purchase additional ballot stock for each election in order to comply with this requirement. This can create an additional expense for those jurisdictions in each election, as well as a potential windfall for the vendor due to the fact that the ballot stock is patented by the vendor and is not widely available through other sources.

Because Verity 2.3 can be used in a manner that complies with the ballot numbering requirement, I would still recommend certification of this system. However, I would recommend that future versions of Verity include a software solution to allow jurisdictions to comply with this requirement without incurring these additional expenses. I would also recommend that future certification standards should require vendors to provide a software solution to this issue as a condition of certification.

General Observations

There are other issues with Verity that are worth noting, but they do not affect my recommendation that Verity 2.3 should be certified for use in Texas.

- The Verity Touch Writer Duo does not offer a significant speed upgrade from the Verity Touch Writer with Access, which is the current paper-based voting system offered by Hart and which is currently certified in Texas. The Duo does provide somewhat greater portability than the Touch Writer with Access because the Duo is housed in a single unit, as opposed to the Touch Writer with Access, which requires a separate printer to be connected to the unit itself. However, the speed at which the Duo prints the ballot is not significantly faster than the speed that the Touch Writer with Access prints that ballot. This does not affect the system's compliance with Texas law, but may create delays at the polling place.
- While the Duo is more portable than the Touch Writer with Access, it may not be an ideal solution for curbside voting. In order for the Duo to print a ballot with the voter's choices, it must remain connected to the casing for the full voting session. To use the Duo in curbside, the entire case would have to be placed in the voter's lap, or the voter would have to reach outside of the vehicle to cast their ballot on a Duo that is placed on a cart or a table. This procedure could be somewhat challenging for voters who require curbside assistance. Jurisdictions could still use other Verity voting machines (such as the Touch with Access) for curbside voting without dealing with these issues, so this does not affect the system's ability to comply with that requirement of Texas law.

Conclusion and Recommendation

Verity 2.3 is an easy to use system that provides many useful features for jurisdictions that would adopt the system. While the Duo does not provide a significant speed advantage over the Touch Writer with Access, the fact that it is all contained within a single unit makes it more portable and more feasible for jurisdictions who wish to adopt a paper-based electronic voting system. The central and precinct scanners presented no issues and appear to collect high-quality images

of the ballots which is helpful at the adjudication stage when reviewing voter intent. The system has a variety of physical and digital security safeguards which provide strong assurances about the security of this system.

Verity 2.3 meets the necessary standards for certification under Texas Election Code §122.001 and complies with all other legal requirements under the Texas Election Code. Therefore, I would recommend certification of the current version of Verity.