KNOWiNK, LLC's PollPad
Version 2.5.2.01b

Apple iPad, Generation 5, 32 Gigabyte
Apple iPad, Generation 6, 32 Gigabyte
Apple iPad, Generation 6, 32 Gigabyte (Cellular)
Apple iPad, Generation 6, 128 Gigabyte
Apple iPad, Generation 7, 32 Gigabyte
Apple iPad, Generation 7, 32 Gigabyte (Cellular)
Apple iPad Air 2, 16 Gigabyte
iOS, Version 13.6
iOS, Version 13.6.1
iOS, Version 13.7
PollPad Application, Version 2.5.2.01b
Star Micronics Printer, Model TSP650II
Star Micronics Printer, Model TSP700II
Brother Pocket Printer, Model JET PJ-763MFi
ePulse, Version 2.5.2.01b

Staff Report

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Secretary of State's Office of
Voting Systems Technology Assessment

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I.   <u>INTRODUCTION</u>

1. Scope

This report presents the test results for all phases of the certification test of the KNOWINK PollPad Version 2.5.2.01b. The purpose of the testing is to test the compliance of the electronic poll book with California laws. Testing also uncovers other findings, which do not constitute non-compliance, and those findings are reported to the electronic poll book vendor to address the issues procedurally. The procedures for mitigating any additional findings are made to the documentation, specifically the KNOWINK PollPad 2.5.2.01b User Guide.

2. Summary of the Application

KNOWiNK submitted an application for the PollPad 2.5.2.01b system on June 26, 2020. The system is comprised of the following major components:

- Apple iPad, Generation 5, 32 Gigabyte
- Apple iPad, Generation 6, 32 Gigabyte
- Apple iPad, Generation 6, 32 Gigabyte (Cellular)
- Apple iPad, Generation 6, 128 Gigabyte
- Apple iPad, Generation 7, 32 Gigabyte
- Apple iPad, Generation 7, 32 Gigabyte (Cellular)
- Apple iPad Air 2, 16 Gigabyte
- iOS, Version 13.6
- iOS, Version 13.6.1
- iOS, Version 13.7
- PollPad Application, Version 2.5.2.01b
- Star Micronics Printer, Model TSP650II
- Star Micronics Printer, Model TSP700II
- Brother Pocket Printer, Model JET PJ-763MFi
- ePulse, Version 2.5.2.01b

In addition to these major components, which includes the executable code and the source code, KNOWiNK was required to submit the following: (1) the technical documentation package (TDP); (2) all the hardware components to field two complete working versions of the system, including all peripheral devices, one for the Functional Test Phase and one for the Security and Telecommunications Penetration Test Phase; (3) all the peripherals that would be in the polling place; and (4) the KNOWiNK PollPad 2.5.2.01b User Guide.

3. Contracting and Consulting

The Secretary of State released a Request for Quote (RFQ) for assistance with the software, security and telecommunications and accessibility testing. The statement of work (SOW) also had an option for the Secretary of State to use the awarded contractor for additional software, security and telecommunications and accessibility testing, if it deemed necessary.

Through the formal California contracting process, the Secretary of State awarded a contract to SLI Compliance.

II. <u>**SUMMARY OF THE SYSTEM**</u>

The system consists of fifteen (15) components:

1. **Apple iPad, Generation 5, 32 Gigabyte**
   The iPad 5 comes with 32GB of storage capacity and is Wi‑Fi, and Bluetooth 4.2 technology compliant.

2. **Apple iPad, Generation 6, 32 Gigabyte**
   The iPad 6 comes with 32GB of storage capacity and is Wi‑Fi, and Bluetooth 4.2 technology compliant.

3. **Apple iPad, Generation 6, 32 Gigabyte (Cellular)**
   The iPad 6 comes with 32GB of storage capacity and is cellular, Wi‑Fi, and Bluetooth 4.2 technology compliant.

4. **Apple iPad, Generation 6, 128 Gigabyte**
   The iPad 6 comes with 162GB of storage capacity and is Wi‑Fi, and Bluetooth 4.2 technology compliant.

5. **Apple iPad, Generation 7, 32 Gigabyte**
   The iPad 7 comes with 32GB of storage capacity and is Wi‑Fi, and Bluetooth 4.2 technology compliant.

6. **Apple iPad, Generation 7, 32 Gigabyte (Cellular)**
   The iPad 7 comes with 32GB of storage capacity and is cellular, Wi‑Fi, and Bluetooth 4.2 technology compliant.

7. **Apple iPad Air 2, 16 Gigabyte**
   The iPad Air 2 comes with 16GB of storage capacity and is Wi‑Fi, and Bluetooth 4.2 technology compliant.

8. **iOS, Version 13.6**
   iOS is an Apple, Inc. mobile operating system exclusively for its hardware. It is the operating system that presently powers many of the company's mobile devices.

9. **iOS, Version 13.6.1**
   iOS is an Apple, Inc. mobile operating system exclusively for its hardware. It is the operating system that presently powers many of the company's mobile devices.

10. **iOS, Version 13.7**
    iOS is an Apple, Inc. mobile operating system exclusively for its hardware. It is the operating system that presently powers many of the company's mobile devices.

11. PollPad Application, Version 2.5.2.01b

The PollPad solution provides an electronic voter check-in and verification process for election officials. PollPad is an Apple iPad application requiring no appendages for operation. The application also provides built-in election management tools, reporting tools and customizable workflows.

12. Star Micronics Printer, Model TSP650II

Star Micronics' TSP650II receipt printer is offered with a variety of interface options and is an iOS compatible Bluetooth printer.

13. Star Micronics Printer, Model TSP700II

Star Micronics' TS700II receipt printer is offered with a variety of interface options and is an iOS compatible Bluetooth printer.

14. Brother Pocket Printer, Model JET PJ-763MFi

Brother JET PJ-763MFi printer is offered with a variety of interface options and is an iOS compatible Bluetooth printer.

15. ePulse, Version 2.5.2.01b

ePulse is a web-based monitoring platform that connects polling places to the centralized location and facilitates communication between administrators and poll workers. It connects poll books, provides polling place status, enables trouble resolution, provides secure voter data management, and allows for poll worker supervision.

III. TESTING INFORMATION AND RESULTS

1. Background

KNOWiNK submitted an application to the Secretary of State for certification of the KNOWiNK PollPad Version 2.5.2.01b (PollPad) on June 26, 2020.

Examination of this system was conducted by the State's technical consultant SLI Compliance with oversight by Secretary of State Staff. Functional Testing, Volume Testing, Source Code Review, Security and Telecommunications Testing, and an Accessibility Review were performed by SLI Compliance from August 3 to September 23, 2020.

2. Functional Testing Summary

SLI Compliance performed functional examination of the PollPad system. During the examination, all electronic poll book functions outlined in the KNOWiNK PollPad 2.5.2.01b User Guide documentation were exercised.

Functional Testing

KNOWiNK provided seven (7) electronic poll books (iPad's with iOS version 13.6, iOS version 13.6.1, iOS version 13.7, and the KNOWiNK PollPad 2.5.2.01b application), access to the KNOWiNK Precinct Central Console website (ePulse), and three printers (Star Micronics TSP650II, Star Micronics TSP700II, and Brother JET PJ-763MFi) for functional testing.

SLI Compliance configured the electronic poll books and exercised their functionality according to the vendor provided technical documentation. The exercises included verification of expected functions of the system as outlined in the vendor provided technical documentation, execution of test cases and verification of the electronic poll book's compliance with State statutes and regulations.

Issues & Observations:

During Functional Testing, approximately twenty-two (22) issues were identified. All twenty-two (22) issues required mitigation.

a. **Documentation**
Nineteen (19) issues were related to minor documentation discrepancies and were provided to KNOWiNK for modification. The documentation was subsequently modified and the changes verified by SLI Compliance and Secretary of State Staff.

b. **Hardware**
There were no issues related to the hardware.

c. **Software**
Six (6) issues [S1]were related to the software and were provided to KNOWiNK for mitigation. The mitigations were implemented and verified by SLI Compliance and Secretary of State Staff. The discrepancy and vendor mitigation/response are listed in the following table:

Table 2A: Functional Testing Software Issues	
Discrepancy	**Vendor Mitigation/Response**
'Import Voter File' status indicators imply incomplete import after import completes.	Although the status indicator implies an incomplete import, the import successfully completes, and this does not hinder performance. KNOWiNK is committed to resolving this issue in the next version of the system.
'Emailing Location Button' function for wrong location voters not working.	KNOWiNK has added use procedure instructions advising jurisdictions how to disable the 'Emailing Location Button.' KNOWiNK is committed to resolving this issue in the next version of the system.
'Registration Time' display column within 'Summary Report' function not displaying registration times for all voters.	KNOWiNK has added use procedure instructions advising jurisdictions how to disable the 'Registration Time' display column. KNOWiNK is committed to resolving this issue in the next version of the system.
Poll Pad application capable of storing a voter's California driver's license number, and Social Security Number via import of the voter file from the jurisdiction's election management system.	This was mitigated by requiring KNOWiNK and/or jurisdictions to exclude the California driver's license number and Social Security Number during the voter file import from the jurisdiction's election management system, and disable any functionality that captures driver's license numbers, and Social Security Number's or portions thereof.

All iPad Operating System (iOS) settings (e.g., updates, date and time, WiFi, etc.) are accessible and capable of manipulation.	This was mitigated by requiring KNOWiNK and/or jurisdictions to deploy devices in Guided Access mode. Guided Access restricts the iOS device to the Poll Pad application.
The Poll Pad application does not require a user specific username and password be entered when accessing the application.	This was mitigated by adjusting the iPad settings to require a password anytime the iPad is accessed. However, user specific usernames and passwords are not available for the Poll Pad application.

3. Software (Source Code) Review Testing Summary

SLI Compliance performed a review of the PollPad source code. During testing, SLI conducted a security and integrity review of the PollPad source code. Zero (0) issues were identified within the PollPad source code.

4. Security and Telecommunications Testing

SLI Compliance performed Security and Telecommunications testing on the PollPad. During testing, a full review of the PollPad was performed to analyze for findings against applicable requirements. The discrepancy and vendor mitigation/response are listed in the following table:

Table 4A: Security and Telecommunications Testing	
Note: The following discrepancy pertains to KNOWiNK's ePulse web-based monitoring platform and is considered by SLI of minimal impact to overall system security.	
Discrepancy	**Vendor Mitigation/Response**
Two Password Fields with Autocomplete Enabled	KNOWiNK is committed to resolving this issue in the next version of the system.

5. Volume Testing Summary

For approximately two days, 250 mock voters were processed on the KNOWiNK Poll PadPollPad v. 2.5.2.01b electronic poll book system. Zero (0) unexpected results or issues were encountered during the Volume Test.

6. Accessibility

SLI evaluated the PollPad against the applicable portions of the Web Content Accessibility Guidelines (WCAG) 2.0 and Section 508 of the Rehabilitation Act of 1973 for compliance. Zero (0) unexpected results or issues were encountered during the Accessibility Review.

IV. COMPLIANCE WITH STATE LAWS AND REGULATIONS

Two (2) sections of the California Code of Regulations, sections 20150 and 20158, describe in detail the requirements any electronic poll book system must meet in order to be approved for use in California elections. These sections are described in detail and analyzed for compliance below.

1) §20150(a)(1): An electronic poll book shall contain, at a minimum, all of the following voter registration data: Name, Address, District/Precinct, Party preference,

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Voter status, Whether or not the voter has been issued a vote by mail ballot, Whether or not the vote by mail ballot has been recorded as accepted by the elections official, and Whether or not the voter's identification must be verified.
The system meets this requirement.

2) §20150(a)(2): An electronic poll book shall not contain the following voter registration data: California driver's license number, and Social Security Number or portion thereof.
The system meets this requirement.

3) §20158(a): The electronic poll book shall not be connected to a voting system at any time.
The system meets this requirement.

4) §20158(b): The electronic poll book shall demonstrate that it accurately processes all activity as prescribed in the vendor's application packet.
The system meets this requirement.

5) §20158(c): The electronic poll book shall be capable of operating for a period of at least two hours on backup power, such that no data is lost or corrupted nor normal operations interrupted. When backup power is exhausted, the electronic poll book shall retain the contents of all memories intact.
The system meets this requirement.

6) §20158(d): The electronic poll book shall be compatible with: all voter registration election management systems used in the State of California, including any software system (middle ware) used to prepare the list of voters for the equipment, and any hardware attached to the electronic poll book (e.g. bar code scanners, signature capture devices, transport media, printers, etc.).
The system meets this requirement.

7) §20158(e): An electronic poll book shall contain all of the following voter registration data: Name, Address, District/Precinct, Party preference, Voter status, Whether or not the voter has been issued a vote by mail ballot, Whether or not the vote by mail ballot has been recorded as accepted by the elections official, and Whether or not the voter's identification must be verified.
The system meets this requirement.

8) §20158(f): The electronic poll book shall encrypt all voter registration data at rest and in transit, utilizing a minimum of Advanced Encryption Standard (AES) 256-bit data encryption, based on recognized industry standards.
The system meets this requirement.

9) §20158(g): The electronic poll book shall provide reliable transmission of voter registration and election information.
The system meets this requirement.

10) §20158(h): The electronic poll book shall have the capability to store a local version of the electronic list of registered voters to serve as a backup.

The system meets this requirement.

11) §20158(i): The electronic poll book shall produce a list of audit records that reflect all actions of the system, including in-process audit records that display all transactions. Such audit records shall be able to be exported in non-proprietary, human readable format.
The system meets this requirement.

12) §20158(j): The electronic poll book shall enable a poll worker to easily verify that the electronic poll book: has been set up correctly, is working correctly so as to verify the eligibility of the voter, is correctly recording that a voter has voted, and has been shut down correctly.
The system meets this requirement.

13) §20158(k): After the voter has been provided with a ballot, the electronic poll book shall permit a poll worker to enter information indicating that the voter has voted at the election. The electronic poll book shall have the capability to transmit this information to every other electronic poll book in the county utilizing the same list of registered voters.
The system meets this requirement.

14) §20158(l): The electronic poll book shall permit voter activity to be accurately uploaded into the county's voter registration election management system.
The system meets this requirement.

15) §20158(m): During an interruption in network connectivity of an electronic poll book, all voter activity shall be captured and the electronic poll book shall have the capacity to transmit that voter activity upon connectivity being restored.
The system meets this requirement.

16) §20158(n): If the electronic poll book uses an electronic signature capture device, the device shall: produce a clear image of the electronic signature capable of verification, and retain and identify the signature of the voter
The system meets this requirement.

17) §20158(o): The electronic poll book shall have the capacity to transmit all information generated by the voter or poll worker as part of the process of receiving a ballot, including the time and date stamp indicating when the voter voted, and the electronic signature of the voter, where applicable, to the county's voter registration election management system.
The system meets this requirement.

18) §20158 (p): The Secretary of State recommends electronic poll books not be enabled or installed with any technologies delineated in the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 wireless local area network (LAN) standards. However, should an electronic poll book be enabled or installed with a wireless technology, the following shall be utilized: a minimum of 256-bit data encryption, a minimum of Wireless Protected Access (WPA) 2 security enabled, compliance with Payment Card Industry Data Security Standards (PCI DSS) version 3.2, a dedicated

wireless access point (WAP) or connection utilized only by county employees or elections officials and void of public or guest access, and devices equipped with one or more of the following: biometric authentication, multi-factor authentication, compliance with current PCI DSS version 3.2 password requirements, or remote wipe technology set to automatically clear a device upon 8 eight failed login attempts. **The system meets this requirement.**

19) §20158 (q): Jurisdictions utilizing a wide area network (WAN) to transmit voter registration data from an electronic poll book to a centralized location shall utilize one of the following: a dedicated leased line, a hardware virtual private network (VPN), or a dedicated cellular connection void of public or guest access. **The system meets this requirement.**

20) §20158 (r): The electronic poll book shall be reviewed for accessibility. **The system meets this requirement.**

V. CONCLUSION

The KNOWiNK PollPad Electronic Poll Book System, Version 2.5.2.01b, in the configuration tested and documented by SLI Compliance and the California Secretary of State, is compliant with all California laws.