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DATE: October 5, 2017

TO: Wisconsin County Clerks
Wisconsin Municipal Clerks
City of Milwaukee Election Commission
Milwaukee County Election Commission

FROM: Richard Rydecki
Elections Supervisor

SUBJECT: ES&S Screen Revisions for DS200 and ExpressVote Ready for Deployment; ExpressLink Now Available for Purchase and Use in Wisconsin

The Wisconsin Elections Commission (WEC) approved Elections Systems and Software (ES&S) voting system EVS 5.2.2.0 and 5.3.2.0 for use in Wisconsin at its June 20, 2017 meeting. The approval was contingent on the revision of several voter notification and instruction screens on two pieces of voting equipment included in this system. The Commission also instructed WEC staff to develop a protocol for the testing and certification of the ExpressLink component that was not included in the original certification, and to ensure that the ExpressLink component satisfied the testing requirements. The screen revisions have been completed and are ready for deployment to voting equipment used in both EVS 5.2.0.0/5.3.0.0 and EVS 5.2.2.0/5.3.2.0 systems. In addition, the ExpressLink has been tested and is now approved for purchase and use in Wisconsin.

DS200 Screen Revisions

WEC staff worked with representatives from ES&S to revise the information presented to the voter on the DS200 crossover notification screen. Staff had the opportunity to test and review the screen on the DS200 when ES&S visited the WEC office on August 30, 2017. An image of the revised screen is provided below:

As shown above, the crossover vote notification screen language has been altered to provide more instruction to the voter. The following table compares the previous language with the revised versions of the screen:

| Crossover Notification Screen	Revised Language	Previous Language
Top instructions	Cross Over Votes Detected. You selected candidates from different parties. If the ballot is cast as marked, no votes in any partisan contests will count.	Cross Over Voted Contests. The following contests have cross over selections:
Above the 'Cast' button	**Cast Ballot With Errors** To cast your ballot with cross over votes, press CAST. Your votes in partisan contests will not be counted.	**Cast Your Ballot** To ignore this message and cast your ballot press CAST.

ExpressVote Screen Revisions

Several screens for the ExpressVote universal voting device were also revised as part of this process. The revisions pertain to the programming for the Partisan Primary and were designed to provide clarity for the voter with instructions that more closely mirror the instructions on the optical scan ballot.

Instructions similar to those found on the optical scan ballot were added to the party preference selection screen so that a voter would understand the impact of making, or not making, a selection on this screen:
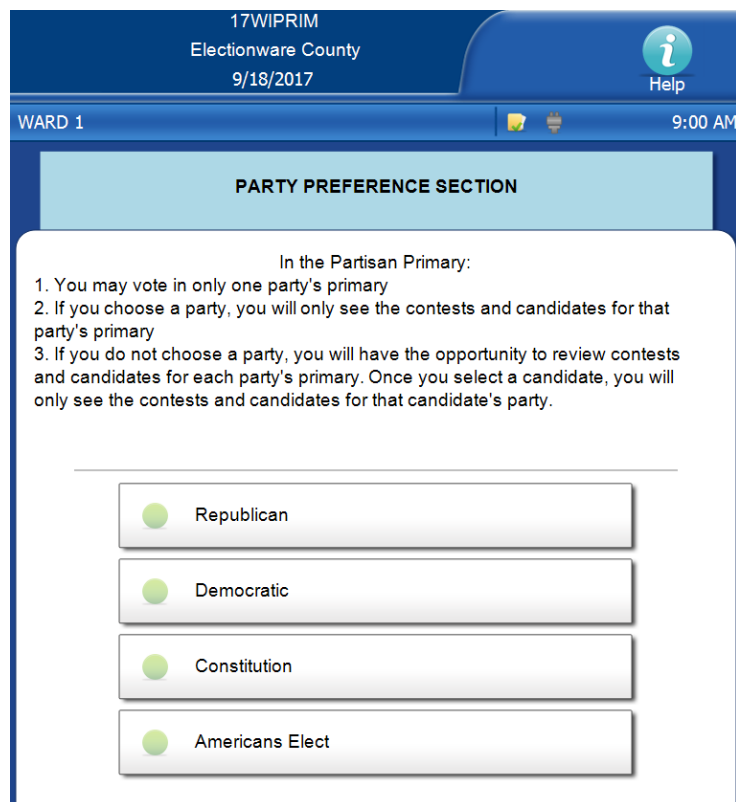
The header on the top of each contest page has been revised to include the name of the political party to increase voter awareness of which section of the ballot they are viewing. In addition, the party name has been added to the line under the office type for each contest screen. These additions have been outlined in red on the screen image provided below:
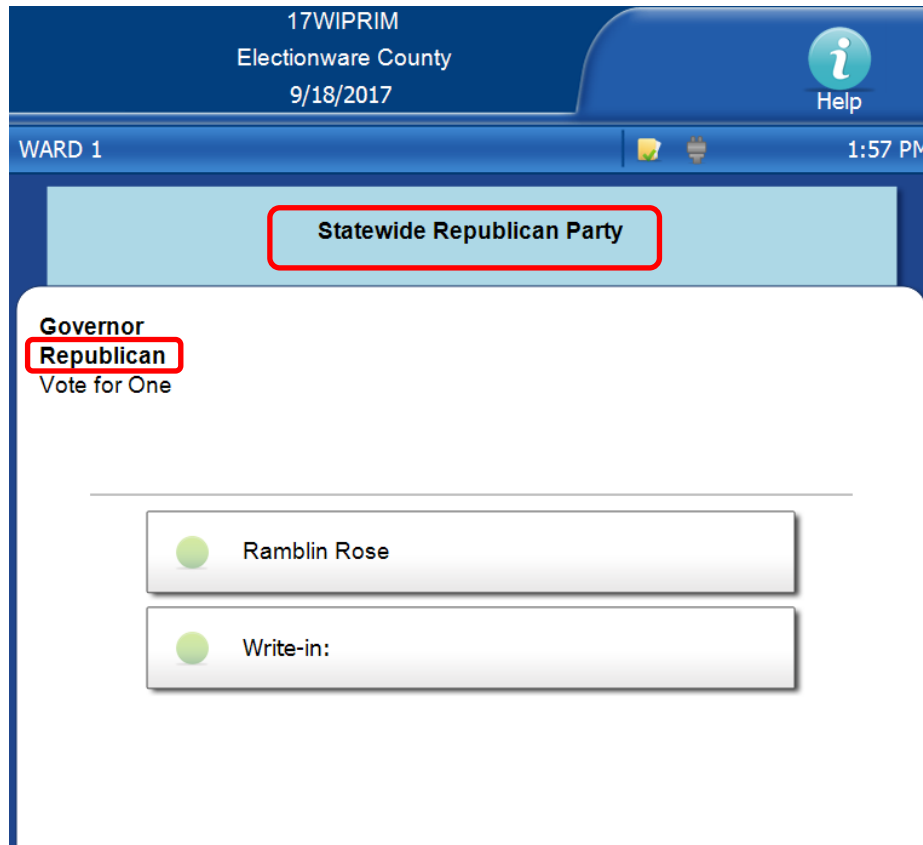
ExpressLink Testing

A protocol for testing and evaluating the ExpressLink was developed and applied to this component of the voting system. This protocol can be found in the appendix of this document. Ten different ballot styles were programmed for a General Election and the ExpressLink was tested to ensure that the activation barcodes that printed on the ballot card activated the correct ballot style. An example of the activation bar code can be found on the image below.
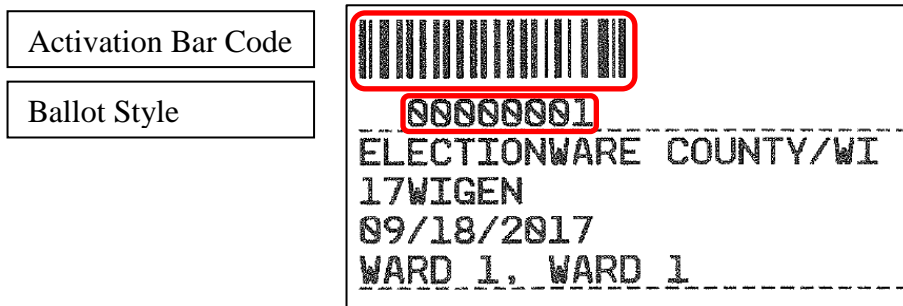
A representative from the vendor demonstrated the functionality of the ExpressLink software program and provided staff the opportunity to review the programming data used to identify and print the activation bar codes on blank ballot cards. Staff then used the ExpressLink printer to print

activation bar codes on ten blank ballot cards for each of the ten ballot styles programmed for the test election, for a total of 100 test ballots.

Staff then voted ten ballots of each ballot style on the ExpressVote and tabulated those ballots using the DS200. The results tape was then reviewed to make sure the DS200 accurately tabulated votes for each different ballot style. The results of the test campaign confirmed that the ExpressVote component satisfied the requirements of the testing protocol, and, therefore, is approved for use in Wisconsin.

Appendix: ExpressLink Testing and Certification Protocol

Protocol Approval Date: July 28, 2017

Subject: WEC Protocol for Testing the Elections Systems and Software ExpressLink Component

Background

As part of an application submitted on March 17, 2017, Elections Systems and Software (ES&S) requested the Wisconsin Elections Commission (WEC) to certify the ExpressLink component as part of the EVS 5.2.2.0 and EVS 5.3.2.0 systems. ExpressLink was outside of the scope of certification that was granted by the U.S. Election Assistance Commission (EAC) for those systems. The WEC staff review of the application materials for EVS 5.2.2.0 and EVS 5.3.2.0 determined that this component was part of the voting system and should be subject to testing and certification, contrary to the EAC review. This component was not included in the voting equipment system that was certified for use in Wisconsin by the WEC on June 20, 2017. Staff was instructed, however, to create a protocol to test and certify the ExpressLink component outside of the EAC process, and to complete approval of the ExpressLink component if it satisfied the testing requirements. Wis. Stat. § 5.91 provides that the WEC may approve any such voting device, automatic tabulating equipment, or related equipment or materials regardless of whether any such system is approved by the EAC and this protocol outlines the procedures for reviewing the ExpressLink consistent with this statutory authority.

Component Information

The ExpressLink is designed for use by election officials in conjunction with the ExpressVote Universal Voting System that was approved as part of the EVS 5.2.20 and EVS 5.3.2.0 systems. This voting system component consists of both the ExpressLink software application and one piece of hardware, the ExpressVote Activation Card Printer. ExpressLink is a Windows application housed on a laptop computer that uses contest and candidate information imported from Election Ware election management system to determine the appropriate ballot style for a voter. The system then prints the activation barcode using the ExpressVote Activation Card Printer. The ExpressVote Activation Card Printer is a small, thermal, on demand printer used to print the ballot activation barcode on the ExpressVote ballot card. A voter would then use the ballot card that contains the barcode printed via the ExpressLink to activate the correct ballot style on the ExpressVote Universal Voting System.

Review and Testing Process

1. WEC staff shall complete a review of supporting documentation provided by the vendor that details the functionality of the ExpressLink before functional testing is conducted. The manufacturer shall provide both a full and a redacted set of the following documentation as part of the process to review the component, if applicable:

    a. Complete specifications for all hardware, firmware and software;

    b. All technical manuals and documentation related to the component;

    c. Complete instruction materials necessary for the operation of the equipment and a description of training available to users and purchasers;

    d. Reports from voting system test laboratories accredited by the US Election Assistance Commission (EAC) demonstrating that the system component functions as described by the vendor in the application materials.

  e. A list of all the states and municipalities in which the system has been approved for use and how long the ExpressLink component has been in use in those jurisdictions.

  f. If any portion of the materials provided to the Wisconsin Elections Commission is copyrighted, trademarked, or otherwise trade secret, the application shall include written assertion of any protected interests and redacted versions of the application and all materials consistent with any properly asserted protected interests. Simply identifying the individual item as "proprietary" is not sufficient. Any assertion of proprietary rights must include detailed specifics of each item protected, the factual and legal basis for protection, whether there is anything public within the protected item, and if there is, how to extract it along with a statement whether there are costs to do so.

  g. If applicable, provide the WEC with a list of software components, pursuant to Wis. Stat. § 5.905, that "record and tally the votes cast with this system." For purposes of this condition, "software components" include vote-counting source code, table structures, modules, program narratives and other human-readable computer instructions used to count votes with this system.

2. The vendor shall submit the component to the WEC for functional testing. The hardware and software submitted for certification testing shall be equivalent, in form and function, to the actual production versions of the component.

  a. An operational status check shall be conducted on the ExpressLink to determine if it functions as described by the vendor using the following procedures:

    i. Arrange the system for normal operation and power on the system.
    ii. Perform any servicing, and make any adjustments necessary, to achieve operational status.
    iii. Operate the equipment in all modes, demonstrating all functions and features that would be used during election operations.
    iv. Commission staff shall verify that all system functions have been correctly executed.

  b. Compatibility of the voting system software components or subsystems with one another, and with other components of the voting system environment, shall be determined through functional tests integrating the voting system software with the remainder of the system and to determine if the software meets the vendor's design specifications.

    i. The election definition file that is created in ElectionWare for use with the ExpressLink shall be verified to determine if the data contained in that file is accurate.
    ii. The ExpressLink will be tested in a mock election to determine if it can print barcodes on ExpressVote ballot cards that access the correct ballot styles.
    iii. The ExpressLink will be tested to determine if it can accommodate multiple ballot styles for an election on a single ExpressVote machine.

<u>Conditions of Approval</u>

As additional conditions of approval, ES&S shall:

1. Reimburse the WEC for all costs associated with the testing campaign for the ExpressLink, where applicable, pursuant to state processes.

2. Agree to any additional conditions for approval and use that may be identified after the review and testing process is complete.