SLI Compliance
Hart Verity ECO-01551 Software Minor Change Evaluation & Review Form

Vendor:	Hart InterCivic	**Date:**	August 22, 2022
Change ID:	ECO-01551	**System(s):**	Verity Voting 2.5
Product:	Verity Controller with Verity Touch Writer Duo attached	**Relevant Application(s):**	Verity Controller with Verity Touch Writer Duo software

Put an X in the appropriate box(es):

	TDP Change
X	**Data Change**
X	**Software Change**

Change Summary Description
This ECO eliminates the cause of extended set up time during Verity Touch Writer Duo (Touch Duo) booth assignment, performed during equipment setup at the polling place. The changes were developed in response to the *Extended Set Up Time During Verity Touch Writer Duo Booth Assignment Root Cause Analysis* (RCA). The extended set up time experienced during simultaneous Touch Duo booth assignment is due to excessive traffic on the Controller-Duo daisy chain, which then causes a concurrency issue. The excess traffic was determined to be caused by Touch Duo re-downloading the Verity database file unnecessarily, during which database write activity is blocked, potentially leading to network service call timeouts for all clients waiting on the booth assignment process. The change is limited to Verity Controller and Verity Duo software only and is applicable to Verity Voting 2.5. There is no impact to the Base OS master image.
Reference Documents:
EAC 2005 Voluntary Voting System Guidelines (VVSG) Vol. II, Sec. 1.7.2 EAC Voting System Testing and Certification Program Manual Ver. 3.0, Sec. 3.5.1. NOC 19-01: Software De Minimis Changes, 11-15-2019
Documentation used in SLI's Assessment:
ECO-01551 Summary - Duo Networking Improvement 4005808 A00. ECO-01551 QA Test Report for Verity 2.5.3 4005809 A00. Hart RCA – Extended Set Up Time During Duo Booth Assignment. 6670-033 A_Verity_KB Duo Best Practices. Verity 2.5.3 Trusted Build Record Verity 2.5.3 Installers Hash Verity Controller 2.5.3 Validated Manifest Verity Duo 2.5.3 Validated Manifest
Manufacturer Reasoning for Minor Change Determination
The change described on this ECO update the Verity Touch Writer Duo and Controller software to harden the equipment set up process only. All changes are transparent to the user. • These changes do not materially alter the system's reliability. • These changes do not materially alter the system's functionality.

• These changes do not materially alter the system's capability.
• These changes do not materially alter the system's operation.

Put an X in the appropriate box:

	Change Evaluation	Comments
	The change affects the form, fit or function of the voting system component(s) and therefore requires further testing to be performed.	N/A
	Minor change: a change to a certified voting system's data and/or TDP, the nature of which will not materially alter the system's reliability, functionality, capability, or operation	N/A
X	**Software Minor change:** a change to the system's software that meets the EAC requirements as identified below.	Software Updates: ▪ Verity Controller and Verity Touch Writer Duo software is updated from 2.5.1 to 2.5.3 Impacted Device Images. The following device images CFast cards will be created by this change: ▪ Verity Controller and Verity Touch Writer Duo 2.5.3 (38BT Tablet)

Software minor changes should have the following general characteristics:

(1) Update a discrete component of the system and do not impact overall system functionality. (2) Do not modify the counting or tally logic of a component or the system (formatting changes to reports are allowable). (3) Do not affect the accuracy of the component or system. (4) Do not negatively impact the functionality, performance, accessibility, usability, safety, or security of a component or system. (5) Do not alter the overall configuration of the certified system (e.g. adding ballot marking device functionality to a previously certified DRE component). (6) Can be reviewed and/or tested by VSTL personnel in a short amount of time (approximately less than 100 hours)

SLI Evaluation and Minor Change Determination

The proposed change will be to Verity Controller and the networked Verity Touch Writer Duo device software only. There are no changes to other Verity devices or workstation software.

ECO-01551 includes source code files impacted by this change. SLI created the Source Code Package using the package Hart sent for the final Trusted Build on 2.5 with the ten updated files replaced. The source code package generated a SHA512 hash of the zip archive and confirmed that it matched what was listed in the included hash file. The source code changes have been reviewed. No issues were found with the changes.

The testing, as detailed in "ECO-01551 QA Test Report for Verity 2.5.3 4005809 A00 including election variations provides sufficient coverage of the implemented software modifications updates to Verify 2.5 to reduce network traffic occurrences of long booth assignment times, even in worst-case scenarios.

All testing passed with no issues or anomalies observed.

As required under section 3.5.1 of the EAC's Voting System Testing and Certification Program Manual Version 3.0, and in accordance with the instruction provided in *NOC 19-01: Software De Minimis Changes*, SLI Compliance considers the nature of ECO-01551 to be Minor and therefore not to affect the Federal certification status for the Verity 2.5 Controller and Touch Writer Duo voting system.

	Approved by/Title	Signature:	Date:
	Darrick Forester Hardware Test Engineer		8/22/2022
	Traci Mapps Vice President, SLI Compliance		8/22/2022