



**ENGINEER CHANGE ORDER (ECO)/ENGINEERING CHANGE REQUEST (ECR) ANALYSIS FORM**

<b>Manufacturer:</b>	Clear Ballot Group (CBG)
<b>System:</b>	ClearVote 2.3
<b>ECR Number:</b>	Cert-194
<b>ECR Description:</b>	ClearCount mirrored display functionality

**Overview:**

A recent upgrade from ClearVote 2.0 to the ClearVote versions referenced above has compromised mirrored display capability for clients operating Dell OptiPlex XE3 desktop computers. The upgrade caused an issue in which the system is unable to mirror video output from Dell Optiplex XE3 desktop stations due to lack of an Intel graphics driver. Consistent with NOC 19-01 issued November 15, 2019, Clear Ballot Group requests de minimis engineering change order (ECO) approval to re-enable mirrored display for CBG clients affected in the following states: WA, OR, and CO.

CBG is requesting the Intel HD graphics Driver v24.20.100.6025 be considered for use with the ClearVote 2.3 version release to mitigate the issue and enable output to multiple displays.

**Supporting Documentation:**

- ECO Request\_Cert-194\_EAC\_Cover.pdf and ECO Request\_Cert-194\_PVV\_Cover.pdf (*CBG ECO Cover Letters*)
- ECO Request\_Cert-194\_ECO\_Request\_Form.pdf (*ECO Request Form*)
- ECO Request\_Cert-194\_Intel\_driver\_test\_case.pdf (*Test Cases*)
- Intel HD Graphics Driver Specification.pdf (*Driver Specifications*)
- Clear Ballot ECO 191 Approval 11\_02\_2022.pdf (*ECO 191 Approval*)

**Engineering Recommendation:**

Supporting documentation review and functional testing were performed to determine acceptance. Functional testing consisted of running the CBG-provided test case as follows: A Server was configured as a “ScanServer” and a Client PC was configured as an “AdminStation” with ClearVote 2.3 software. The new Graphics driver was installed on the AdminStation. The AdminStation was then connected to a second monitor and the computer set to mirror the display to both monitors.

Based on successful test case performance, Pro V&V determined the Intel HD graphics Driver v24.20.100.6025 is compatible for use with the ClearVote 2.3 version release. No additional testing required.

**Engineering Analysis:** De Minimis – No additional testing required

<p><b>Reviewer:</b></p> <p align="center">Wendy Owens _____ Printed Name</p> <p align="center"><i>Wendy Owens</i> _____ Signature</p> <p align="center">11/22/2022 _____ Date</p>	<p><b>Approver:</b></p> <p align="center">Michael L. Walker _____ Printed Name</p> <p align="center"><i>Michael L. Walker</i> _____ Signature</p> <p align="center">11/22/2022 _____ Date</p>
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