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

Manufacturer:	Clear Ballot Group (CBG)
System:	ClearVote 2.1, 2.1.5, and 2.2
ECR Number:	Cert-191
ECR Description:	Intel graphics driver v24.20.100

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 tested for use with the ClearVote 2.2, 2.1.5, and 2.1 version releases to mitigate the issue and enable output to multiple displays.
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Supporting Documentation:
Cover_letter_ECO_driver (amended October 14, 2022)).pdf *(CBG ECO Cover Letter)*
ECO Request Form_Cert-191_Intel_driver (amended October 14, 2022).xlsx *(ECO Request Form)*
ECO Request_Cert-191_Intel_driver_test_case.pd *(Test Cases)*
Engineering Change Request Form Optiplex XE3 Graphics Driver (October 14, 2022).pdf *(ECO Request Form)*
Intel HD Graphics Driver Specification.pdf *(Driver Specifications)*

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 2.2 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. This process was then repeated for both ClearVote 2.1 and ClearVote 2.1.5 voting systems.

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 2.2, 2.1.5, and 2.1 version releases. No additional testing required.

Engineering Analysis: De Minimis – No additional testing required

Reviewer:	Approver:
Wendy Owens	Michael L. Walker
Printed Name	Printed Name
Wendy Owens	*Michael L. Walker*
Signature	Signature
10/28/2022	10/28/2022
Date	Date