



ENGINEER CHANGE ORDER (ECO) ANALYSIS FORM

Manufacturer: Election Systems & Software (ES&S)

System: Electionware

ECO Number: 1111

ECO Description: Update to the ElectionAudioDataStore Java Class to improve efficiency when performing Touch Screen Ballot finalization.

Overview:

For large elections, the Touch Screen Ballot finalization process takes a significant amount of time to complete. The less than ideal finalization processing time is caused by the Electionware Touch Screen Ballot module processing only one item at a time and then reprocessing that same item several more times during the duration of the finalization process.

By updating the ElectionAudioDataStore class of the Touch Screen Ballot module to process data in batches of 100 items instead of only 1 item, the time it takes to perform the Touch Screen Ballot finalization process is reduced by more than 75%.

Affected Systems:

Federal: EVS 6100, EVS 6110

Supporting Documentation:

ECO 1111 - EW Touch Screen Ballot Update.pdf (*ES&S ECO*)

ECO 1111 - Installation Instructions.pdf (*installation instructions*)

Engineering Recommendation:

Technical documentation review, source code review, build, and installation of the patch, and verification testing performed to approve change. The patch was built and tested at Pro V&V's facility. Testing consisted of verifying system performance prior to and immediately following the patch per the provided instructions. It was demonstrated that the patch did not adversely impact the system's operation and the condition was successfully resolved. No additional testing required. The product from this batch is a folder containing the following files with the SHA 256 hash value:

ECO1111.jar - 9146c8a6281cdf842afe2b1a079d6b73529ec9b3edee81f68adb350bf32d2f99

electionwaresuite.conf - ada52c049463da0500a37ee2297694be321723e5aa5d571e24a8e441b513db67

install.bat - cb0c6e1c683eef06ccd7b3db6da8966de78ed8d6215247dd8f79f404e771371a

ReadMe.docx - b6227221cb4ed86a3dacada75afb4711fd2e8841f5b6a71f205222643bbe5c6b

Engineering Analysis: De Minimis

(signatures on page 2)

Reviewer:

Stephen Han

Printed Name

Stephen Han

Signature

04/02/2021

Date

Approver:

Jack Cobb

Printed Name

Jack Cobb

Signature

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Date