U. S. ELECTION ASSISTANCE COMMISSION
VOTING SYSTEM TESTING AND CERTIFICATION PROGRAM
1225 New York Avenue, NW, Suite 1100
Washington, DC. 20005

November 10, 2008

Mr. Steve Pearson, Vice President of Certification
Election Systems and Software, Inc.
11208 John Galt Boulevard
Omaha, NE 68137

RE: Approval of Test Plan

Dear Mr. Pearson,

This letter is to inform you that version 9.0 of the test plan submitted by SysTest Labs, for the
testing of ES&S Unity 4.0 voting system, has been reviewed and approved pending the addition
of the items noted below by SysTest Labs to what will become the final version of the Test Plan.
Per section 4.4.4.3 of the EAC's Testing and Certification Program Manual ("Program Manual")
a test plan is approved based on the information submitted. Any new or additional information
must be reported to the EAC and may require a change in the testing requirements at any point in
the certification process. Approval of a test plan simply signifies that the tests proposed, if
performed properly, appear to be sufficient to fully test the system.

I also want to take this opportunity to remind you of the EAC's requirements following approval
of a test plan. Section 4.5 of the Program Manual requires manufacturers to enable VSTLs to
report any changes to a voting system or an approved test plan directly to the EAC. Under this
section, Manufacturers are also required to enable VSTLs to report all test failures or anomalies
directly to the EAC. In addition, please see Section 4.5.1. for information regarding the reporting
requirements for changes to a system or test plan during testing, and Section 4.5.2 for information
regarding the reporting requirements for anomalies or failures found during testing.

Section 4.6 of the Program Manual lays out the various requirements for the submission and
approval of a test report. Please be aware that all test reports will be posted on the EAC's website
in accordance with Federal law. Chapter 10 of the Program Manual outlines the responsibilities of
the EAC, the VSTL, and the Manufacturer regarding the dissemination of this information.

Finally, after final approval of the test report and the issuance of an Initial Decision of
Certification by the Decision Authority (the EAC Executive Director) consistent with Section 4.6
of the Program Manual there are additional steps that must be taken before final certification will
be granted. These steps are outlined in Chapters 5 & 6 of the Program Manual and include items
such as the execution of a trusted build, providing the EAC with specific system identification
tools, and documentation that all other pre-certification requirements have been met. I strongly
encourage you and the VSTL to re-read these chapters in order to make the final steps of the
process as efficient as possible.

If you should have any questions regarding the approval of the test plan referenced above, or the rest of the EAC's certification process please contact me.

Item	Test Plan Citation	Change	Reason / Discussion
1	Pg. 11, Sec. 1.4.1	Some SLP's listed in this section have not been provided to the EAC. Specifically: • SLP-VC-03 rev1.0 - Communication with Manufacturers • SLP-VC-10a rev1.0 - Test Method Development • SLP-VC-10b rev1.0 - Test Method Validation	All SLP's cited should be made available to the EAC & TR's.
2	Sec. 3.2 Table 5	Do future testing using Windows VISTA or provide some support that the systems delivered will in fact use Windows XP. If use of XP is defended then some explanation is needed of how the vendor will secure systems with XP.	This item is raised for discussion with the vendor/VSTL. The Test Plan proposes testing with Windows XP SP2. However, Microsoft has announced end of life for this OS. Already and increasingly in the future the vendor will have difficulty buying a PC with XP. Therefore either some support is needed on how this will be addressed so that customers receive systems with Windows XP or further testing should be performed using Windows Vista. This comment is not requiring retesting due to the change of operating system but that any future testing be done using Windows Vista. From the Microsoft website (http://www.microsoft.com/windows/lifecycle/default.mspx), for XP the Direct OEM and Retail License Availability (end date) was June 20, 2008 and the System Builder License Availability (end date) is January 31, 2009.

3	**Sec. 4.3.6 – Security Test**	Related to the item above, if further testing is done on VISTA then the security checklist for VISTA should be added.	This comment is connected to the one about and calls for a secure configuration of Windows VISTA to be evaluated.
4	**Pg. 40, Table 8**	Security evaluation of AIMS should be more extensive	The security testing of AIMS seems unduly limited with only 4 requirements listed for testing. The testing of AIMS should either be expanded to be more comprehensive or an explanation justifying why the limited testing is justified.
5	**Pg. 41, Table 8**	Apply VSS 6.5.3 to M100 & DS200 or justify their exclusion.	It is not immediately obvious why VSS 6.5.3 is being applied to the iVotronic and not to the M100 & DS200. Either this requirement should be applied to all 3 units or an explanation given as to why the requirement does not apply to the M100 & DS200.
6	**Pg. 42, Table 8**	Apply requirements of VSS 6.5.4.1 to M100 & DS200, as appropriate.	Do not the M100 & DS200 have modem drivers that are subject to VSS 6.5.4.1? Please review exemption from other requirements.
7	**Pg. 43, Table 8**	Requirements of VSS 6.6.1 should be applied to M100 & DS200, or a justification given as to why they don't apply.	It appears that the DS200 and M100 should be tested for 6.6.1.b - *Employ digital signature for all communications between the vote server and other devices that communicate with the server over the network?*
8	**Pg. 46, Table 9**	Recovery testing is specified as being part of the security test case. It should also be part of the volume and stress test cases.	The recovery test is cited as being done as part of the security test case. Recovery testing should also be done as part of the Volume and Stress test cases. On p. 49 the following would indicate that it is part of the stress testing: *Error Recovery and Error Messaging is synonymous with Stress level tests with the focus being "How does the system react / recover when a defined or identified limit is met or exceeded.* There are many kinds of errors and a voting system is required to recover appropriately from all of them. It is fine to implement evaluation of a system's ability to recover from errors as part of other test cases. However, the system's recover from errors should be a component of any test case that produces errors, especially those, like security, volume and stress that will tend to produce different kinds of errors.

9	**Pg. 46, Table 9**	Bridge from table 9 to the appropriate test cases, implementing the test for "processing more than the expected number of ballots/voters per precinct, to processing more than the expected number of precincts"	Table 9 states that within the Volume, Stress and Accuracy test cases there will be tests "processing more than the expected number of ballots/voters per precinct, to processing more than the expected number of precincts"? Where is this done? Is it done in the 3000 PCTS - Functional p. 91 or the Accuracy Test p. 119 (I don't understand the chart - i.e. # of ballots)?
10	**Pg. 60, Sec. 6.5**	Add a paragraph describing evaluation of a system's recovery after an error occurs. Some wording to the effect: When an error occurs and the voting system is subsequently restored the system shall be checked to confirm that the system was restored to the condition that existed immediately prior to the error. Specifically the following will be checked: • System logs will be reviewed both to confirm that required information was properly logged and also to determine the system state before the error.	Sec. 6.5, as written, deals almost exclusively with error messages. It also needs to include a review of the system's error recovery. When an error occurs and the system is subsequently restored the compliance of that restoration with VSS 2.2.3, Error Recovery. Note that this procedure should be required any time an error occurs, not just when a test intentionally creates an error. So if during testing an error occurs, the systems error recovery should be check for compliance.

		• Election programming • Voting data • System and election configuration This procedure will be followed any time an error occurs, whether the error was intentionally created by the test or not.	
11	**Pg. 60, Sec. 6.5**	VSS 2.2.5.2.2 b-g, should be added as a citation in the sentence: "SysTest Labs uses Vendor documentation, Vendor provided test cases, and System Analysis to determine the scope of testing for Jurisdiction Facing error messages as it pertains to VSS V2: A.4.3.5, VSS V1: 2.2.3 (a - c), VSS: V1: 2.2.5.2.3."	These requirements also apply to error messages to election officials and system operators and should be evaluated with other related requirements. This requirement should then be assigned for implementation to a specific test case.
12	**Pg. 124**	Document signature should be made current.	Document signature is from May 2008 and should be updated.

Brian J. Hancock

Director, Testing and Certification