STATE OF NORTH CAROLINA
WAKE COUNTY

BEFORE THE EXECUTIVE DIRECTOR
OF THE STATE BOARD OF ELECTIONS

ADMINISTRATIVE
APPROVAL ORDER

IN THE MATTER OF CERTIFICATION
OF ES&S VOTING SYSTEM UNITY 3.4.1.1

THIS MATTER CAME BEFORE THE EXECUTIVE DIRECTOR OF THE STATE
BOARD OF ELECTIONS on May 22, 2014, for administrative approval of the
Election Systems and Software Unity 3.4.1.1 voting system for the State of North
Carolina.

FINDINGS OF FACT

1. Under the provisions of 8 NCAC 4.0302(b), the Executive Director of the
State Board of Elections may approve enhancements of previously
certified voting systems if the enhancement does not substantially alter the
voting system as certified by the State Board of Elections.

2. The Election Systems & Software (ES&S) Unity 3.4.1.1 system operates
on the Windows 7/Windows Server 2008 platform and includes election
management software, the Model 100 precinct tabulator, the DS200
precinct tabulator with modeming, the Model 650 central tabulator, the
DS850 central tabulator, and the AutoMARK voter assist terminal. This
system was designed to replace the previously certified ES&S Unity
3.4.0.1 system which operates on the Windows XP/Windows Server 2003
platform.

3. All hardware, software, and firmware changes pertaining to the ES&S
Unity 3.4.1.1 system are set out in the attached May 22, 2014 letter of
ES&S which is attached hereto and incorporated as part of this order.

4. All changes in the May 22, 2014 attachment were reviewed by Brooks
Garrett-Jones, Election Preparation and Support Specialist with this
agency and this agency's expert on voting systems.

5. After review, Election Technician Garrett-Jones reported that the changes
were enhancements and do not substantially alter the ES&S Unity 3.4.0.1
voting system as approved by the Executive Director of the State Board of
Elections. He further found the changes to be de minimus.
CONCLUSION OF LAW

That the enhancements to the ES&S Unity 3.4.1.1 voting system as set out in the attachment have not substantially altered the voting system as certified by the State Board of Elections and, in compliance with 8 NCAC 4.0302(b), is subject to approval by the undersigned.

ORDER

THEREFORE IT IS ORDERED, the enhancements to ES&S Unity 3.4.1.1 system voting system as set out in the attachment are approved.

This the 8th day of April, 2015.

Kim Westbrook Strach
Executive Director
State Board of Elections
Thursday, May 22, 2014

Ms. Kim Westbrook Strach
North Carolina State Board of Elections
401 North Harrison Street
Raleigh, NC 27603

RE: Request for State Certification of Election Systems & Software’s Unity 3.4.1.1 Release

Dear Ms. Westbrook Strach:

Recently, Election Systems & Software (ES&S) completed conformance testing to the 2002 Voting System Standards (VSS) at National Technical Systems (NTS), formally Wyle Laboratories, of the Unity 3.4.1.1 Voting System. The Unity 3.4.1.1 Voting System is a modification to the previously state certified Unity 3.4.0.1 Voting System and is hereby being presenting to the North Carolina State Board of Elections for certification consideration. Please accept this letter as our request to certify the Unity 3.4.1.1 Voting System.

The importance of the Unity 3.4.1.1 release is it provides North Carolina jurisdictions an election management system operating system change from Windows XP/Windows Server 2003 to Windows 7/Windows Server 2008 and also provides the DS200 Hardware Revision 1.3 to North Carolina jurisdictions. Outlined below are the differences in version numbers from the State Certified Unity 3.4.0.1 release to the Unity 3.4.1.1 release.

<table>
<thead>
<tr>
<th>North Carolina</th>
<th>State Certification of Unity 3.4.1.1</th>
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<tbody>
<tr>
<td></td>
<td>Unity 3.4.0.1</td>
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<tr>
<td><strong>Election Management System (EMS)</strong></td>
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<tr>
<td>Audit Manager (AM)</td>
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<tr>
<td>Election Data Manager (EDM)</td>
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<td>ESS Image Manager (ESSIM)</td>
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<td>Election Reporting Manager (ERM)</td>
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<td><strong>ES&amp;S Tabulators</strong></td>
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<td>Model 100 Precinct Tabulator</td>
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<td>M650 Central Tabulator</td>
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<td>DS200 Precinct Tabulator with Modeming</td>
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<td>DS850 Central Tabulator</td>
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<td><strong>Voter Assist Terminal and Software</strong></td>
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<td>VAT Previewer</td>
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<td><strong>SFTP Software for DS200 Modeming (COTS)</strong></td>
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<td>Cerberus FTP Server</td>
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<td>IPSwitch WS_FTP12</td>
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Summarized below are the modifications and enhancements from Unity 3.4.0.1 to Unity 3.4.1.1. Please refer to the System Overview, System Change Notes, and System Operation Manuals located within the Technical Data Package for additional details pertaining to the products or the Unity 3.4.1.1 Voting System.

**Election Management System**

The Unity 3.4.1.1 release features an upgraded operating system from Windows XP/Windows Server 2003 to the Windows 7/Windows Server 2008 operating system. Certain installation files had to be updated as a result of the operating system being modified hence the difference in many of the software version numbers from Unity 3.4.0.1 to Unity 3.4.1.1 (ie: EDM version 7.8.1.0 to version 7.8.2.0).

**ES&S’ DS200 Tabulator**

The Unity 3.4.1.1 release features the addition of DS200 Hardware Revision 1.3 (HW 1.3). As a result of end-of-life components in the DS200 HW 1.2, some components were modified in HW 1.3 that includes a new motherboard, new scanner board, redesigned spring plate, redesigned beveled contact image sensors, replacement of the standard 512MB DRAM in HW 1.2 with a 1GB DRAM in HW 1.3, and lastly a new plastic covering to update ES&S’ company logo and provide a battery access door. The new components and redesigns listed above along with the DS200 firmware modifications mentioned below are for optimal performance in terms of throughput.

The DS200 firmware was also slightly modified to include a redesign for the audible indicators (a request from a North Carolina jurisdiction during the Unity 3.4.0.1 certification), enhancements to improve scanner throughput, and updates to the overvote, ballot not inserted, and ballot entry screens. The Unity 3.4.1.1 also features modeming via analog modem connection like the previously certified Unity 3.4.0.1 release.

**ES&S’ DS850 Tabulator**

The DS850 firmware was updated to include the ability to set a ballot pick delay to the millisecond, addition of a ‘Print All’ option for printing precinct results reports, ability to configure certain outstack criteria to be sorted to the middle bin instead of just the top bin, and several reporting enhancements.

Included with this cover letter is a CD-ROM containing the NTS Unity 3.4.1.1 Test Report and ES&S’ Technical Data Package (TDP). The TDP consists of the company overview, product brochures, system overview, product maintenance manuals, and system operations manuals. ES&S requests the North Carolina State Board of Elections approve our request for certification and schedule, if required, a certification examination to review the modifications between Unity 3.4.0.1 and Unity 3.4.1.1 at your earliest convenience.

If you require additional documentation or clarification, please do not hesitate to contact me via telephone at 402-970-1143 or email at brswartz@essvote.com.

Sincerely,

Benjamin Swartz  
NC State Certification Manager  
Election Systems & Software, LLC

cc: Mr. Steve Pearson, Vice President – Voting Systems, ES&S  
Mr. Owen Andrews, PrintElect

encl:  
CD-ROM (Technical Data Package)  
Product Brochures