



United States Election Assistance Commission

Certificate of Conformance

OpenElec Voting System 1.0
Unisyn



The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *2005 Voluntary Voting System Guidelines (2005 VVSG)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the *EAC Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: OpenElec Voting System

Model or Version: Version 1.0

Name of VSTL: Wyle Laboratory

EAC Certification Number: UNS10121966-OE

Date Issued: January 13, 2010

Executive Director, U.S. Election Assistance Commission

Scope of Certification Attached



Scope of Certification

Manufacturer: **Unisyn Election Solutions**

Product: **OpenElect Voting System 1.0**

Laboratory: **Wyle Laboratories** *Certificate:* **UNS10121966-OE** *Standard:* **VVSG 2005** *Date:* **01/13/2010**

This document describes the scope of the validation and certification of the system defined above. Any use, configuration changes, revision changes, additions or subtractions from the described system are not included in this evaluation.

Significance of EAC Certification

An EAC certification is an official recognition that a voting system (in a specific configuration or configurations) has been tested to and has met an identified set of Federal voting system standards. An EAC certification is **not**:

- An endorsement of a Manufacturer, voting system, or any of the system's components.
- A Federal warranty of the voting system or any of its components.
- A determination that a voting system, when fielded, will be operated in a manner that meets all HAVA requirements.
- A substitute for State or local certification and testing.
- A determination that the system is ready for use in an election.
- A determination that any particular component of a certified system is itself certified for use outside the certified configuration.

Representation of EAC Certification

Manufacturers may not represent or imply that a voting system is certified unless it has received a Certificate of Conformance for that system. Statements regarding EAC certification in brochures, on Web sites, on displays, and in advertising/sales literature must be made solely in reference to specific systems. Any action by a Manufacturer to suggest EAC endorsement of its product or organization is strictly prohibited and may result in a Manufacturer's suspension or other action pursuant to Federal civil and criminal law.

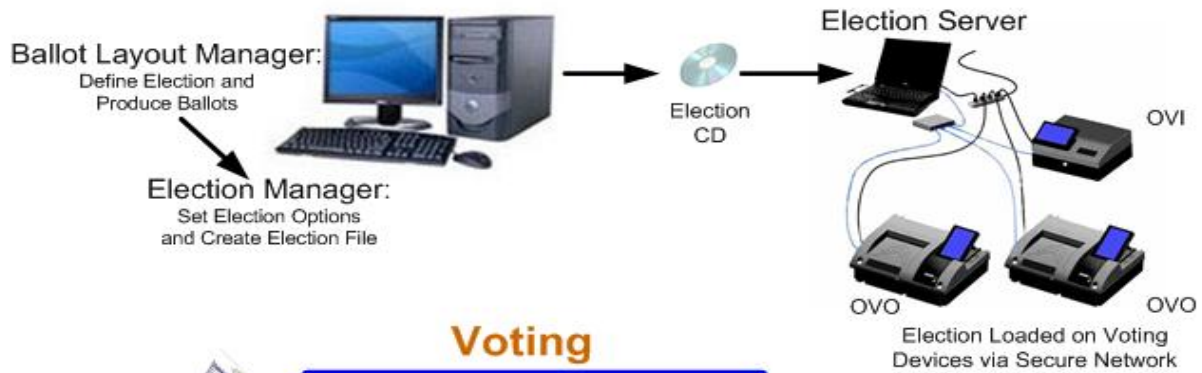
Language capability:

In addition to English, the voting system has the capability of presenting the ballot, ballot selections, review screens and instructions in Spanish.

Components Included:

This section provides information describing the components and revision level of the primary components included in this Validation.

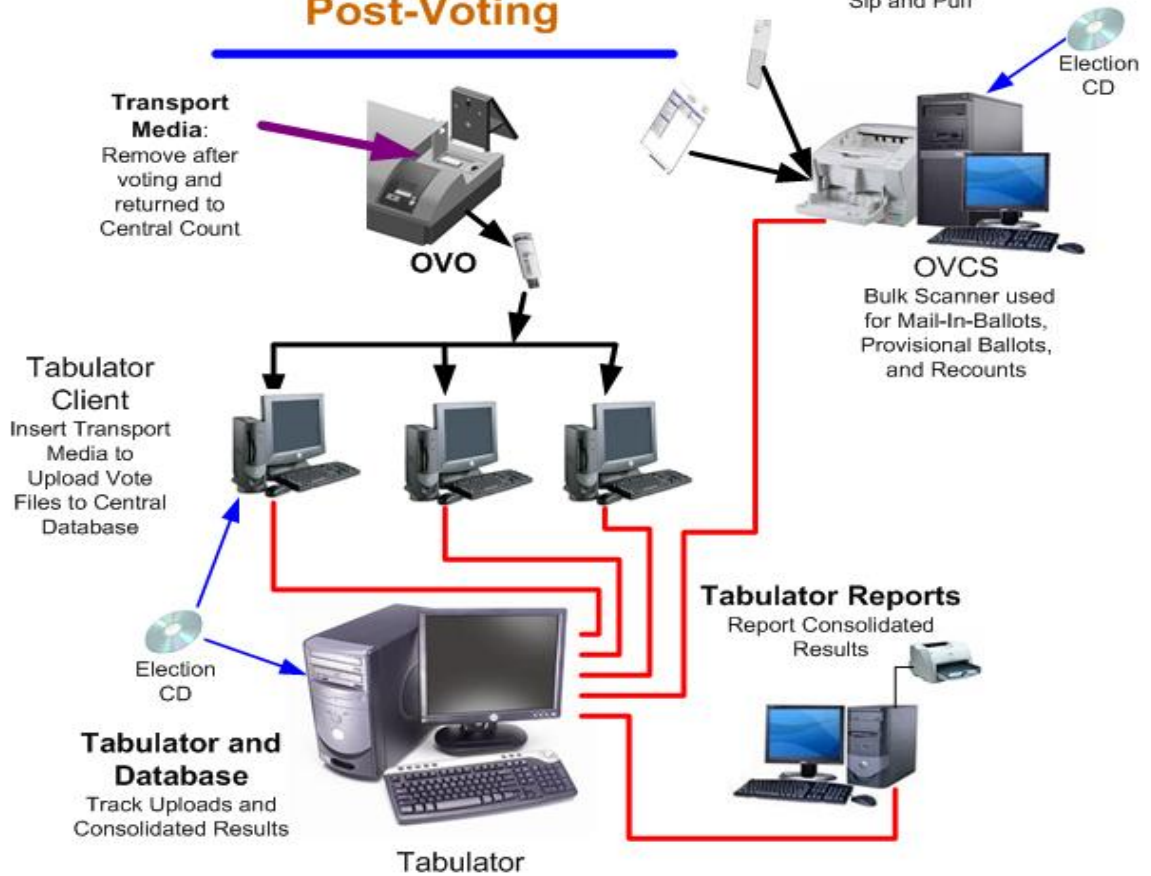
Pre-Voting



Voting



Post-Voting



System Component	S/W or F/W Revision	H/W Revision
OVO OpenElect Voting Optical	Firmware v. 1.0	Hardware v. 1.0
OVI OpenElect Voting Interface	Firmware v. 1.0	Hardware v. 1.0
OVCS Open Elect Voting Central Scan	Firmware v. 1.0	Hardware v. 1.0
Ballot Layout Manager (BLM)	v. 1.0	-----
Election Manager (EM)	v. 1.0	-----
Software Server (SS)	v. 1.0	-----
Election Server (ES)	v. 1.0	-----
Tabulator Client (TC)	v. 1.0	-----
Tabulator (Tab)	v. 1.0	-----
Tabulator Reports (TR)	v. 1.0	-----
Desktop	-----	Dell Optiplex 755
Laptop	-----	Latitude E5500
Linux	CentOS 5.2	-----
Printer		1720dn
MySQL Database	5.0.45-7	-----

Evaluated Operating System or COTS	Comments
Linux CentOS 5.0	Unisyn
Linux CentOS 5.0	Unisyn
Linux CentOS 5.2	Unisyn
See Below	Unisyn
See Below	Unisyn
See Below	Unisyn
See Below	Unisyn
See Below	Unisyn
See Below	Unisyn
See Below	Unisyn
Dell	PC, Intel Core2Duo 2.53 GHz or faster processor, 4 GB RAM, 250 GB hard drive (Mirrored), 16x DVD-RW +/- drive, 3.5-inch drive, Super VGA (800x600) or higher resolution video adapter and monitor, appropriate drivers
Dell	Intel Core2Duo T7250 2.0 GHz , 800 MHz 2.00 GB Ram
Linux	None
Dell	With Printer Stand/550 Sheet Drawer
Sun Microsystems	None

System Component	S/W or F/W Revision	H/W Revision
MySQL connector	5.1.7	-----
Java JRE	6.0 update 2	-----
Java SE Development Kit	6.0 update 2	-----
JavaHelp	2.0_05	-----
Java Cryptography Extension	Jurisdiction Policy Files 6	-----
JasperReports (and supporting libraries)	2.0.5	-----
Apache Tomcat	6.0.13	-----
PDI Scanner Driver and Libraries for OVCS	2.1.0, 1.1.3	-----
Citizen Printer for OVO	1.0.0.6	-----
Xerces/Xalan XML	2.6.0	-----
openChrome Video Driver	0.2.900-7.e15	-----
eGalax Touchscreen Driver	2.03.1712 (32 bit) Kernel 2.6	-----
PDI Scanner Driver and Libraries for OVO	2.1.0, 1.1.3	-----
FVWM Desktop Window Manager	2.4.19	-----
RXTX - Library and Jar for serial printer	2.1-7r2	-----

Evaluated Operating System or COTS	Comments
Sun Microsystems	None
Sun Microsystems	None
Sun Microsystems	None
Sun Microsystems	None
Sun Microsystems	None
jasperSoft	None
Apache	None
Peripheral Dynamic Inc	Two files in library
Citizen Mico Human Tech	None
	None
openChrome	None
eGalax	None
Peripheral Dynamic Inc	Two files in library
FVWM	None
RXTX	None

System Limitations

This table depicts the limits the system has been tested and certified to meet.

Characteristic	Limit	Comment
Maximum Elections	8	
Maximum Precincts in Election	2000	
Maximum Splits per Precinct	9	
Maximum Districts	400	
Maximum Contest per District	20	
Maximum Parties	34	
Maximum Parties in Primary	12	
Maximum Parties w/ Straight Ticket	12	
Maximum District Types	25	
Maximum Languages	10	
Maximum Ballot Styles per Election	400	
Maximum Contest per Election	150	There are 150 possible places for contest. However due to ballot constraints a maximum of 81 will fit with single candidates for each.
Maximum Measures per Election	30	
Maximum Instruction Blocks per Election	5	
Maximum Headers per Election	50	
Maximum Candidates per Contest	120	
Maximum Vote for N of M	25	
Maximum Ballots per OVO	10000	
Maximum Card Stock Size	8.5 x 14 and 8.5 x 17 (Duplex)	
Maximum Ballot positions (8.5 x 17) without Rank Choice Voting	348	Limit
Maximum Ballot positions (8.5 x 17) with Rank Choice Voting	696	Limit
Maximum Ballot positions (8.5 x 14) without Rank Choice Voting	276	Limit
Maximum Ballot positions (8.5 x 14) with Rank Choice Voting	552	Limit
Maximum Ballot Style per OVO	30/9/10	
Maximum Ballots Processed (Ballot Box)	700	
Maximum Units Simultaneously Loading	20	

Characteristic	Limit	Comment
Maximum Precincts initialized per OVO	30	
Maximum Precincts initialized per OVO in Early Voting	All	

Functionality

This section outlines the features that the system provides and does not provide

Feature/Characteristic	Yes/No	Comment
<i>Accessibility (vol. 1. sect. 3.2)</i>		
Forward Approach		
Parallel (Side) Approach		
<i>Closed Primary (vol. 1. sect. 2.1.7.2)</i>		
Primary: Closed	X	Supported
<i>Open Primary (vol. 1. sect. 2.1.7.2)</i>		
Primary: Open Standard (provide definition of how supported)	X	A registered voter may vote in any party primary regardless of his own party affiliation
Primary: Open Blanket (provide definition of how supported)		
<i>Partisan & Non-Partisan: (vol. 1. sect. 2.1.7.2)</i>		
Partisan & Non-Partisan: Vote for 1 of N race	X	Supported
Partisan & Non-Partisan: Multi-member (“vote for N of M”) board races	X	Supported
Partisan & Non-Partisan: “vote for 1” race with a single candidate and write-in voting	X	Supported
Partisan & Non-Partisan “vote for 1” race with no declared candidates and write-in voting	X	Supported
<i>Write-In Voting: (vol. 1. sect. 2.1.7.2)</i>		
Write-in Voting: System default is a voting position identified for write-ins.	X	Supported
Write-in Voting: Without selecting a write in position.		
Write-in: With No Declared Candidates	X	Supported
Write-in: Identification of write-ins for resolution at central count		
<i>Primary Presidential Delegation Nominations & Slates: (vol. 1. sect. 2.1.7.2)</i>		

Feature/Characteristic	Yes/No	Comment
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party		
Slate & Group Voting: one selection votes the slate.		
<i>Ballot Rotation: (vol. 1. sect. 2.1.7.2)</i>		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	X	Top to Bottom By Precinct grouping
<i>Straight Party Voting: (vol. 1. sect. 2.1.7.2)</i>		
Straight Party: A single selection for partisan races in a general election	X	Supported
Straight Party: Vote for each candidate individually	X	Supported
Straight Party: Modify straight party selections with crossover votes	X	Supported
Straight Party: A race without a candidate for one party	X	Supported
Straight Party: "N of M race (where "N">1)	X	Supported
Straight Party: Excludes a partisan contest from the straight party selection.	X	Supported
<i>Cross-Party Endorsement: (vol. 1. sect. 2.1.7.2)</i>		
Cross party endorsements, multiple parties endorse one candidate.		
<i>Split Precincts: (vol. 1. sect. 2.1.7.2)</i>		
Split Precincts: Multiple ballot styles	X	Supported
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	X	Supported
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	X	Supported
<i>Vote N of M: (vol. 1. sect. 2.1.7.2)</i>		
Vote for N of M: Counts each selected candidate, if the maximum is not exceeded.	X	Supported
Vote for N of M: Invalidates all candidates in an overvote (paper)	X	Supported
<i>Recall Issues, with options: (vol. 1. sect. 2.1.7.2)</i>		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote Yes or No Question)	X	Supported
Recall Issues with Options: Retain is the first option, Replacement candidate for the second or more options (Vote 1 of M)	X	Supported

Feature/Characteristic	Yes/No	Comment
Recall Issues with Options: Two contests with access to a second contest conditional upon a specific vote in contest one. (Must vote Yes to vote in 2nd contest.)		
Recall Issues with Options: Two contests with access to a second contest conditional upon any vote in contest one. (Must vote Yes or No to vote in 2nd contest)		Overtured - US District Court 7/29/03: CA Election Code sect. 11383
<i>Cumulative Voting (vol. 1. sect. 2.1.7.2)</i>		
Cumulative Voting: Voters are permitted to cast, as many votes as there are seats to be filled for one or more candidates. Voters are not limited to giving only one vote to a candidate. Instead, they can put multiple votes on one or more candidate.		
<i>Ranked Order Voting (vol. 1. sect. 2.1.7.2)</i>		
Ranked Order Voting: Voters rank candidates in a contest in order of choice. A candidate receiving a majority of the first choice votes wins. If no candidate receives a majority of first choice votes, the last place candidate is deleted, each ballot cast for the deleted candidate counts for the second choice candidate listed on the ballot. The process of eliminating the last place candidate and recounting the ballots continues until one candidate receives a majority of the vote.	X	Supported
Ranked Order Voting: Voters can write in a ranked vote.	X	Supported
Ranked Order Voting: A ballot stops being counting when all ranked choices have been eliminated	X	Supported
Ranked Order Voting: A ballot with two choices ranked the same, stops being counted at the point of two similarly ranked choices.	X	Supported
Ranked Order Voting: A ballot with a skipped rank counts the vote for the next rank.	X	Supported
Ranked Order Voting: The total number of votes for two or more candidates with the least votes is less than the votes of the candidate with the next highest number of votes, the candidates with the least votes are eliminated simultaneously and their votes transferred to the next-ranked continuing candidate.	X	Supported
<i>Provisional or Challenged Ballots (vol. 1. sect. 2.1.7.2)</i>		
Provisional/Challenged Ballots: A voted provisional ballots is identified but not included in the tabulation, but can be added in the central count.	X	Supported
Provisional/Challenged Ballots: A voted provisional ballots is included in the tabulation, but is identified and can be subtracted in the central count.		

Feature/Characteristic	Yes/No	Comment
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of the ballot.	X	Supported
<i>Overvotes (vol. 1. sect. 5.4.4)</i>		<i>Must support for specific type of voting system</i>
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	X	Supported. Overvotes are tabulated for each office as an Over / Under Vote report in Vote Tabulation
<i>Undervotes (vol. 1. sect. 5.4.4)</i>		<i>Must support</i>
Undervotes: System counts undervotes cast for accounting purposes	X	Supported. Undervotes are tabulated for each office as an Over / Under Vote report in Vote Tabulation
<i>Blank Ballots (vol. 1. sect. 2.3.3.3, 4.1.5.1.b, 4.1.5.1.d, & 5.4.4)</i>		
Totally Blank Ballots: Any blank ballot alert is tested.	X	Supported
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	X	Supported
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	X	Supported
<i>Display/Printing Multi-Lingual Ballots (vol. 1. sect. 2.2.1.3.a)</i>		<i>Must support one R</i>
Spanish	X	Supported
Chinese	X	Supported
Filipino	X	Supported
Japanese	X	Supported
Korean	X	Supported
Vietnamese	X	Supported
<i>Demonstrates the voting system capability to handle the designated language groups. (vol. 1 sect. 2.2.1.3.a)</i>		
Default language (English),	X	Supported
Secondary language using a Western European font	X	Supported
Ideographic language (such as Chinese or Korean),	X	Supported
Non-written languages requiring audio support	X	Supported

System supports all ISO approved languages. For testing purposes Unisyn is only testing to the languages requires in California.

Engineering Change Orders (ECO's) included in the Certified Products

<i>Date</i>	<i>ECO</i>	<i>Manufacturer</i>
05/27/09	ECO# 16831	ILTS
05/27/09	ECO# 16832	ILTS
05/27/09	ECO# 16833	ILTS
06/04/09	ECO# 16834	ILTS
06/04/09	ECO# 16835	ILTS
07/07/09	ECO# 16836	ILTS
09/09/09	ECO# 16837	ILTS
07/27/09	ECO# 16838	ILTS
12/09/09	ECO# 16840	ILTS
12/09/09	ECO# 16841	ILTS