



United States Election Assistance Commission

Certificate of Conformance

Unisyn OpenElect 1.0.1
(Modification)



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: OpenElect

Model or Version: Version 1.0.1 (Modification)

Name of VSTL: Wyle Laboratories

EAC Certification Number: UNS10121966-OE-WI

Date Issued: July 21, 2011

Executive Director, U.S. Election Assistance Commission

Scope of Certification Attached

Manufacturer: Unisyn Voting Solutions
System Name: OpenElect 1.0.1
Certificate: UNS10121966-OE-WI

Laboratory: Wyle Laboratories
Standard: 2005 VVSG
Date: 07/21/2011



Scope of Certification

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.

Certified System before Modification:

Unisyn Voting Solutions OpenElect 1.0
Certificate ID: UNS10121966-OE

Anomalies/additions addressed in OpenElect 1.0.1:

OpenElect 1.0.1 corrects a defect discovered by Unisyn during internal testing. The defect concerned the inability of the OVO to close the polls using a "Close Card". The defect was

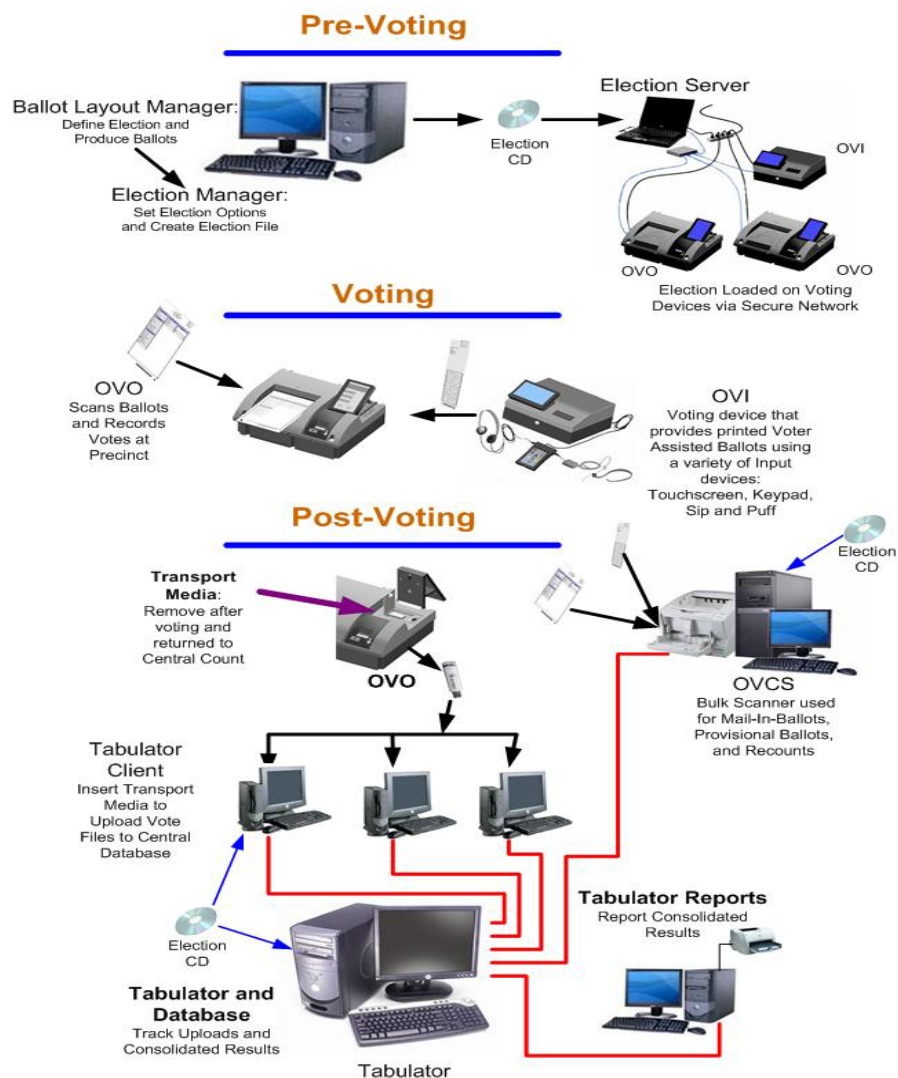
introduced due to a change made in the internal clock during previous certification testing. The defect occurred when using a “Close Card” to close the polls on the OVO with the date set to Election Day. Using a “Close Card” would not cause the polls to close.

The OVO and OVCS are capable of extracting write-in locations from full page ballots, as images, for use in election results reporting. Full page ballots are non-OVI ballots which are hand marked by the voter. A feature has been added to the OVO, to print a “Write-In Report” which contains the write-in images extracted from ballots.

Unisyn submitted an alternative motherboard and processor that can be used on the OVO. The Jetway 1.5GHz rev 4.0 model number J7F2WE1G5S-OC-LF motherboard and processor was introduced as an alternative to the Jetway 2GHz rev 3.1 model number J7F2WE2GS-OC-LF motherboard and processor used in the OVO. Thus an OVO can use either model.

Components Included:

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



System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
OVO	1.0.1	8033-93000 Rev. E	Linux CentOS 5.0	Hardware Version reflect the de-minimus changes approved by the EAC
OVI	1.0	8033-93003, Rev. F	Linux CentOS 5.0	
OVCS	1.0.1	Hardware v. 1.0	Linux CentOS 5.2	
Ballot Layout Manager (BLM)	1.0			+ Database amendment for font size – see EAC CCR0001
Election Manager(EM)	1.0			
Software Server(SS)	1.0			
Election Server(ES)	1.0			
Tabulator Client(TC)	1.0			
Tabulator(Tab)	1.0			
Tabulator Reports(TR)	1.0			
COTS Components				
Desktop		Dell Optiplex 755	Dell	PC, Intel Core2Duo 2.53 GHz or faster processor, 4 GB RAM, 250 GB hard drive (Mirrored), 16x DVDRW +/- drive, 3.5-inch drive, Super VGA (800x600) or higher resolution video adapter and monitor, appropriate drivers
Laptop		Latitude E5500	Dell	Intel Core2Duo T7250 2.0 GHz , 800 MHz 2.00 GB Ram
MySQL Database	5.0.45-7		Sun Microsystems	
MySQL connector	5.1.7		Sun Microsystems	
Java JRE	6.0 update 2		Sun Microsystems	
Java SE	6.0 update 2		Sun Microsystems	

System Component	Software or Firmware Version	Hardware Version	Operating System or COTS	Comments
Development Kit				
JavaHelp	2.0_05		Sun Microsystems	
Java Cryptography Extension	Jurisdiction Policy Files 6		Sun Microsystems	
JasperReports (and supporting libraries)	2.0.5		JasperSoft	
Apache Tomcat	6.0.13		Apache	
PDI Scanner Driver and Libraries for OVCS	2.1.3, 1.2.0		Peripheral Dynamic Inc.	Two files in library
Citizen Printer for OVO	1.0.0.6		Citizen Mico Human Tech	
openChrome Video Driver	0.2.900-7.e15		openChrome	
eGalax Touchscreen Driver	2.03.1712 (32 bit) Kernel 2.6		eGalax	
PDI Scanner Driver and Libraries for OVO	2.2.1,1.2.0		Peripheral Dynamic Inc.	Two files in library
FVWM Desktop Window Manager	2.4.19		FVWM	
RXTX - Library and Jar for serial printer	2.1-7r2		RXTX	

System Limitations

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

Characteristic	Limiting Component	Limit	Comment
Maximum Ballot positions (8.5 x 17) without Rank Choice Voting		348	
Maximum Ballot positions (8.5 x 17) with Rank Choice Voting		696	
Maximum Ballot positions (8.5 x 14) without Rank Choice Voting		276	
Maximum Ballot positions (8.5 x 14) with Rank Choice Voting		552	
Precincts in Election		2000	
Contests in Election		150	
Candidates/Counters in Election		3000	
Candidates/Counters in Precinct		3000	
Candidates/Counters in Tabulator		3000	
Ballot Styles in Election		400	
Contests in a Ballot Style		12	

Characteristic	Limiting Component	Limit	Comment
Candidates in a Contests		120	
Ballot Styles in a Precinct		1	All parties are considered same ballotstyle with party qualifier. Precinct allows 10 splits.
Number of Parties		34	12 with primary.
Vote For in Contest		25	
Supported Languages per Election		10	
Number of Write-ins		25	Per contest

Functionality

2002 VSS Supported Functionality Declaration 3.2.0.0 Rev 2

Feature/Characteristic	Yes/No	Comment
Voter Verified Paper Audit Trails		
VVPAT	No	
Accessibility (vol. 1. sect. 2.2.7)		
Forward Approach	No	
Parallel (Side) Approach	No	
Closed Primary (vol. 1. sect. 2.2.8.2)		
Primary: Closed	Yes	
Open Primary (vol. 1. sect. 2.2.8.2)		
Primary: Open Standard (provide definition of how supported)	Yes	A registered voter may vote in any party primary regardless of his own party affiliation
Primary: Open Blanket (provide definition of how supported)	No	
Partisan & Non-Partisan: (vol. 1. sect. 2.2.8.2)		
Partisan & Non-Partisan: Vote for 1 of N race	Yes	
Partisan & Non-Partisan: Multi-member ("vote for N of M") board races	Yes	
Partisan & Non-Partisan: "vote for 1" race with a single candidate and write-in voting	Yes	
Partisan & Non-Partisan "vote for 1" race with no declared candidates and write-in voting	Yes	
Write-In Voting: (vol. 1. sect. 2.2.8.2)		
Write-in Voting: System default is a voting position identified for write-ins.	Yes	
Write-in Voting: Without selecting a write in position.	No	
Write-in: With No Declared Candidates	Yes	

Feature/Characteristic	Yes/No	Comment
Write-in: Identification of write-ins for resolution at central count	No	
Primary Presidential Delegation Nominations & Slates: (vol. 1. sect. 2.2.8.2)		
Primary Presidential Delegation Nominations: Displayed delegate slates for each presidential party	No	
Slate & Group Voting: one selection votes the slate.	No	
Ballot Rotation: (vol. 1. sect. 2.2.8.2)		
Rotation of Names within an Office; define all supported rotation methods for location on the ballot and vote tabulation/reporting	Yes	Top to Bottom By Precinct grouping
Straight Party Voting: (vol. 1. sect. 2.2.8.2)		
Straight Party: A single selection for partisan races in a general election	Yes	
Straight Party: Vote for each candidate individually	Yes	
Straight Party: Modify straight party selections with crossover votes	Yes	
Straight Party: A race without a candidate for one party	Yes	
Straight Party: "N of M race (where "N">1)	Yes	
Straight Party: Excludes a partisan contest from the straight party selection	Yes	
Cross-Party Endorsement: (vol. 1. sect. 2.2.8.2)		
Cross party endorsements, multiple parties endorse one candidate.	No	
Split Precincts: (vol. 1. sect. 2.2.8.2)		
Split Precincts: Multiple ballot styles	Yes	
Split Precincts: P & M system support splits with correct contests and ballot identification of each split	Yes	
Split Precincts: DRE matches voter to all applicable races.	No	
Split Precincts: Reporting of voter counts (# of voters) to the precinct split level; Reporting of vote totals is to the precinct level	Yes	
Vote N of M: (vol. 1. sect. 2.2.8.2)		
Vote for N of M: Counts each selected candidate, if the maximum is not exceeded.	Yes	
Vote for N of M: Invalidates all candidates in an overvote (paper)	Yes	
Recall Issues, with options: (vol. 1. sect. 2.2.8.2)		
Recall Issues with Options: Simple Yes/No with separate race/election. (Vote Yes or No Question)	Yes	
Recall Issues with Options: Retain is the first option, Replacement candidate for the second or more options (Vote 1 of M)	Yes	
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 2 nd contest.)	No	

Feature/Characteristic	Yes/No	Comment
Recall Issues with Options: Two contests with access to a second contest conditional upon any vote in contest one. (Must vote Yes to vote in 2 nd contest.)	No	Overtured - US District Court 7/29/03: CA Election Code sect. 11383
Cumulative Voting (vol. 1. sect. 2.2.8.2)		
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.	No	
Ranked Order Voting (vol. 1. sect. 2.2.8.2)		
Ranked Order Voting: Voters can write in a ranked vote.	Yes	
Ranked Order Voting: A ballot stops being counting when all ranked choices have been eliminated	Yes	
Ranked Order Voting: A ballot with a skipped rank counts the vote for the next rank.	Yes	
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	Yes	
Ranked Order Voting: A ballot with two choices ranked the same, stops being counted at the point of two similarly ranked choices.	Yes	
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.	Yes	
Provisional or Challenged Ballots (vol. 1. sect. 2.2.8.2)		
Provisional/Challenged Ballots: A voted provisional ballots is identified but not included in the tabulation, but can be added in the central count.	Yes	
Provisional/Challenged Ballots: A voted provisional ballots is included in the tabulation, but is identified and can be subtracted in the central count	No	
Provisional/Challenged Ballots: Provisional ballots maintain the secrecy of the ballot.	Yes	
Overvotes (vol. 1. sect. 4.4.4) Must support for specific type of voting system		
Overvotes: P & M: Overvote invalidates the vote. Define how overvotes are counted.	Yes	

Feature/Characteristic	Yes/No	Comment
Overvotes: DRE: Prevented from or requires correction of overvoting.	No	
Overvotes: If a system does not prevent overvotes, it must count them. Define how overvotes are counted.	No	
Overvotes: DRE systems that provide a method to data enter absentee votes must account for overvotes.	No	
Undervotes (vol. 1. sect. 4.4.4)		
Undervotes: System counts undervotes cast for accounting purposes	Yes	
Blank Ballots (vol. 1. sect. 2.4.3.3, 3.2.5.1.2, 3.2.5.1.3, & 4.4.4)		
Totally Blank Ballots: Any blank ballot alert is tested.	Yes	
Totally Blank Ballots: If blank ballots are not immediately processed, there must be a provision to recognize and accept them	Yes	
Totally Blank Ballots: If operators can access a blank ballot, there must be a provision for resolution.	Yes	
Display/Printing Multi-Lingual Ballots (vol. 1. sect. 2.3.1.3.1.a)		Must support one
Spanish	Yes	
Alaska Native (Other Group specified)	No	
Aleut	No	
Athabascan	No	
Eskimo	No	
Native (Other Group Specified)	No	
Chinese	Yes	
Filipino	Yes	
Japanese	Yes	
Korean	Yes	
Vietnamese	Yes	
Apache	No	
Cent/So American	No	
Cheyenne	No	
Chickasaw	No	
Choctaw	No	
Navajo	No	
Other Tribe-Specified	No	
Paiute	No	
Pueblo	No	
Seminole	No	
Shoshone	No	
Sioux	No	
Tohono O'Odham	No	
Tribe not specified	No	
Ute	No	

Feature/Characteristic	Yes/No	Comment
Yaqui	No	
Yuman	No	
Demonstrates the voting system capability to handle the designated language groups. (vol. 1. sect. 2.3.1.3.1.a)		
Default language (English),	Yes	
Secondary language using a Western European font	Yes	
Ideographic language (such as Chinese or Korean)	Yes	
Non-written languages requiring audio support	Yes	

Baseline Certification Engineering Change Order's (ECO)

This table depicts the changes that were added since the certification of the OpenElect 1.0 voting system (UNS10121966-OE):

Change ID	Date	Component	Description	Inclusion
ECO 16842	5/24/10	OVO, OVI	Label Change	Mandatory
ECO 16843	5/24/10	OVO	Motherboard and BIOS Change	Optional
ECO 16847	5/24/10		Updated AC distribution cable	Optional
EAC 1001	5/24/10 11/30/10	OVO, OVI	Hardware changes (Ram, harddrive, transport media)	Optional
ECO 16844	11/30/10	OVI	Motherboard and BIOS Change	Optional
ECO 16855	11/30/10	OVI	Star TSP743II-24 printer mainboard and a revision of the printer's firmware	Optional
ECO 16856	11/30/10	OVI	Label change	Mandatory
ECO 16857	11/30/10	OVI	Changes to the chassis (network seal, printer mount, chassis bottom, cover bracket, and chassis hinge)	Optional
ECO 16858	11/30/10	OVO, OVI	TM documentation change Log file documentation change	Optional
ECO 16859	11/30/10	OVI	ADA keypad drawing change to correct an error	Optional
CCR 0001	02/22/11	EMS	Changed the database field to allow for 12pt font. Changed database field to thicken target area indicator.	Optional