

INDIANA ELECTIONS DIVISION
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VSTOP Report
to
The Indiana Election Commission
Unisyn OpenElect 2.0.A

Application for Voting System Certification
Evaluation of a New Voting System

July 3, 2018



Indiana Voting System Technical Oversight Program (VSTOP)
The Bowen Center for Public Affairs
Ball State University

Voting System Certification Recommendation Report

Name of Vendor	<u>Unisyn Voting Solutions</u>
Address	<u>2310 Cousteau Court, Vista, CA 92012</u>
Contact Information	<u>Chris Ortiz, (760) 419-7516</u>
Application For	<u>Evaluation of a New Voting System</u>
Model Number	<u>Open Elect Voting System, Version 2.0.A</u>
Type of Voting System	<u>Optical Scan Ballot Card Voting System</u>
Application Date [Attachment 1]	<u>April 16, 2018</u> <u>Revised on July 3, 2018</u>
Escrow Agent and Deposit Date	<u>NCC Group – June 13, 2018</u>
Voting System Testing Lab (VSTL) [Attachment 2]	<u>Pro V&V, 700 Boulevard South Suite 102</u> <u>Huntsville, AL 35806</u>

System Overview:

The OpenElect 2.0.A Voting System is a modification to OpenElect 2.0.

OpenElect 2.0 was tested at Ball State University, Muncie, Indiana on February 2, 2018 by the Voting System Technical Oversight Program (VSTOP) team. VSTOP conducted demonstration tests on hardware, firmware and software components. The test also included verification of all required elements of the Indiana statutes regarding voting systems as well as an ADA Compliance demonstration. Mock elections, including the IED approved test case scenarios for straight party voting (pursuant to SEA 61), were conducted on the voting system. VSTOP also reviewed the VSTL test reports for OpenElect 2.0 submitted by Unisyn [Attachment 4] and concluded that OpenElect 2.0 was not compliant with the Voluntary Voting System Guidelines (VVSG 2005) as required by Indiana Code 3-11-15-13.3.

The modified System, OpenElect 2.0.A, is VVSG 2005 compliant, as demonstrated by the VSTL Test Report for OpenElect 2.0.A [Attachment 2]. As the attached memo provided by Pro V&V [Attachment 3] states, the modification did not impact any of the previous functionality. The modification included NIST CMVP validated modules for compliance with the telecommunications requirements of VVSG. This system was certified by the U.S. Election Assistance Commission on June 5, 2018 [Attachment 5 – EAC Certification of Conformance].



Scope of Certification (a list of all voting system components, with limitations therein):

OVO: This is a Precinct Ballot Scanner with Software or Firmware version 2.0.A and Hardware version Rev A, E.

Software	
CentOS Linux	6.3
Java JRE + Unlimited Cryptographic Extension	1.6.0 02
Validator	2.0.A

Hardware	Make	Model
Hardware Sub-Component		
Duplex Ballot Scanner		
Duplex Ballot Scanner	PDI Scan	Pagescan III
Scanner Power Adapter	eUrasia Power	uA36-1024
58 mm Thermal Printer		
58 mm Thermal Printer	Citizen Printer	CT-5281
Printer Power Adapter	Citizen Printer	28AD4
Computer		
Chassis	Morex	Morex 2699
Power Adapter	DC/DC converter	MX-0608F
Motherboard	Jetway	JNF9D-2550
Memory	SuperTalent – Onboard RAM	3120-21282
Hard Drive	Western Digital	WD5000AZLX
Adapter	EDAC	EA 10951c-120
1 Gb USB TM		
Innodisk	1 Gb USB	DEUA1-01G172AC1SB-B088
Delkin	1 Gb USB	SLC-MLC
7" LCD Touchscreen Display		
7" LCD Touchscreen Display	Xenarx Technologies	700TSV
AC Power In Module		
AC Power In Module	Delta	Emi 10BEEEG3G
UPS		
Minuteman Power Technologies	Para Systems, Inc.	Entrust

OVI-VC: This is a Ballot Marking Device, Early voting station, and Accessible voting station with Software or Firmware version 2.0.A and Hardware version Rev A, B.

Software	
CentOS Linux	6.3
Java JRE + Unlimited Cryptographic Extension	1.6.0 02
Validator	2.0.A

Hardware	Make	Model
Hardware Sub-Component		
Sip and Puff (Optional)		
Sip and Puff (Optional)	Origin Instruments	AirVoter
Headphone (Optional)		
Headphone (Optional)	Koss On-Ear Headphones	KPH5
15 in LCD Touchscreen Display		
15 in LCD Touchscreen Display	GVision	P15BX 2450-30120
82.5 mm Thermal Printer		
82.5 mm Thermal Printer	Star	TSP743IID-24, serial interface
Printer Adapter	Star	PS60A-24B 1
Computer		
Power Adapter Kit	DC-DC Converter	MX-0608F
Motherboard	Jetway	JNF9D-2550
Memory	SuperTalent – Onboard RAM	3120-21282
Hard Drive	Western Digital	WD5000AZLX
Adapter	EDAC	EA 10951c-120
1 Gb USB TM		
Innodisk	1 Gb USB	DEUA1-01G172AC1SB-B088
Delkin	1 Gb USB	SLC-MLC
AC Power In Module		
AC Power In Module	Delta	Emi 10BEEEG3G
UPS		
Minuteman Power Technologies	Para Systems, Inc.	Entrust

OVCS: This is a Central Scanner with Software or Firmware version 2.0.A and Hardware version 2.0.

Software	
CentOS Linux	6.5 and 6.8
Java JRE + Unlimited Cryptographic Extension	1.6.0 02
Apache-Tomcat Application Server	6.0.13
MySQL Database (BLM, EM, A, and Tab only)	5.0.45-7
JasperReports	2.0.5
OpenVPN	2.4.4
OpenSSL	1.0.1f
OpenSSL FIPS Object Module	2.0.10 (cert #1747)

Hardware	Make	Model
Hardware Sub-Component		
Large Volume Scanner		
Large Volume Scanner	Cannon	DR-X10C
Desktop Scanner		
Desktop Scanner	Cannon	DR-M160II
UPS		
Minuteman Power Technologies	Para Systems, Inc.	Entrust

FVT: This is a Ballot Marking Device, Early voting station and Accessible voting station with Software or Firmware version 2.0.A and Hardware version Rev A.

Software	
Android	4.4.4
Java JRE + Unlimited Cryptographic Extension	1.8

Hardware	Make	Model
Hardware Sub-Component		
13.3 in Touchscreen Tablet		
13.3 in Touchscreen Tablet	Android Tablet	GVision - T13
Tablets Battery Charger	Sager Power System	GC30B-4PIJ
82.5 mm Thermal Printer		
82.5 mm Thermal Printer	Star	TSP743IIU-24
Printer Adapter	Lind 60W 24VDC	ST2425-626
Barcode Reader 1D,2D series		
Barcode Reader 1D,2D series	Newland	FM420
USB Hub		
USB Hub	Tripp Lite	USB Hub
Hub Adapter	Meanwell	PSD-15A-05
1 Gb USB TM		
Innodisk	1 Gb USB	DEUA1-01G172AC1SB-B088
Delkin	1 Gb USB	SLC-MLC
Micro SD		
Micro SD	Innodisk Industrial	Micro SD 2.0
Battery		
Battery Pack 12 V 6.0 AH	Powers Sonic	PSH-1255-FR
Adapter	Mean Well	GC30B-4PIL
AC Power In Module		
AC Power In Module	Delta	Emi 10BEEG3G
Sip and Puff (Optional)		
Sip and Puff	Origin Instruments	AirVoter
Headphone (Optional)		
Headphone	Cyber Acoustics	ACM-70
USB to Ethernet RJ45 Adapter (Optional)		
USB to Ethernet RJ45 Adapter	D-Link	DUB-E100
UPS		
Minuteman Power Technologies	Para Systems, Inc.	Entrust

EMS Workstation Requirements:

Software:	
System Component	Software Version
Ballot Layout Manager (BLM)	2.0.A
Election Manager(EM)	2.0.A
Tabulator Client(TC)	2.0.A
Tabulator(Tab)	2.0.A
Tabulator Reports(TR)	2.0.A
Auditor	2.0.A
Common*	2.0.A
Unisyn Secure*	2.0.A
Logger*	2.0.A
Scripter*	2.0.A

Hardware: Dell Optiplex, Precision Desktop and Dell Latitude Laptop, Minimum Specifications; 1.8 GHz Processor, 2 GB RAM, 250GB (or larger) Hard Drive.
Limitations: The Vendor has stated that the Election Server and Software Server will not be included in 2.0.A systems in Indiana in order to assure that there will be no telecommunication functionality. [Attachment 6]

* These components are not listed in VSTL test report [Attachment 2] whereas these are listed in the EAC Certification of Conformance [Attachment 5] and the IEC-11 [Attachment 1].

Recommendation:

On the basis of VSTOP's review and evaluation, we find that the voting system referenced herein (and with the Scope of Certification and the limitations therein) meets all the requirements of the Indiana Code for use in the State of Indiana. This finding includes compliance with the legal requirements for voters with disabilities.

Jay Bagga

Dr. Jay Bagga, Co-Director
Date: July 3, 2018

Bryan Byers

Dr. Bryan Byers, Co-Director
Date: July 3, 2018

List of Attachments:

- [1] IEC-11 application dated February 16, 2018
- [2] VSTL (Pro V&V) Report on OpenElect 2.0.A dated May 5, 2018
- [3] VSTL (Pro V&V) Memo on OpenElect 2.0.A dated June 6, 2018
- [4] VSTL (Pro V&V) Report on OpenElect 2.0 dated October 4, 2017
- [5] EAC Certification of Conformance on OpenElect 2.0.A dated June 5, 2018
- [6] Email communication between Pro V&V, Unisyn and VSTOP