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2.13 - Democracy Suite[®] System Change Notes

Version: 5.2-CO::46

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RELEVANT DISCLAIMERS

The final list of items to be disclaimed in this release is to be confirmed. Please be advised that this document may make reference to the following Democracy Suite[®] functionalities:

- AIMS Data Translator
- Avalue tablets
- EMS Enterprise configuration
- Election Data Exchange Station (EDES)
- ImageCast[®] Evolution
- ImageCast[®] Evolution Dual Monitor functionality
- ImageCast[®] Listener
- ImageCast[®] Precinct
- ImageCast[®] Precinct Audio
- ImageCast[®] Precinct Ballot Marking Device (BMD)
- ImageCast[®] Precinct BMD Audio
- Rank Choice Voting (RCV)
- Recall Issues
- Mode 2 asymmetric cryptography
- Mode 3 asymmetric cryptography
- NYS General and Primary Ballot Template
- Modem and transmission functionality
- WinEDS Importer

These functionalities are not components of the current Democracy Suite[®] 5.2-CO certification campaign, and should be disregarded throughout the document.

Revision History

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Chapter 1

Introduction

Per VVSG volume II, this document discusses the various changes, modifications, and upgrades to the EAC-certified Democracy Suite[®] product line, developed and manufactured by Dominion Voting Systems.

The change notes in this document are baselined on the Democracy Suite[®] 4.21 platform.

1.1 Document Use

This document is intended for use with the Democracy Suite[®] 5.2 platform.

1.2 Design Responsibility

Dominion Voting is the design authority.

1.3 Document Status

This is a working specification for discussion and analysis. Details are subject to change.

1.4 Patent Status

Certain system concepts, as well as many implementation and construction details, are protected by a series of U.S. and foreign patents pending.

Chapter 2

System Change Notes

2.1 EMS

2.1.1 Adjudication

Feature	Details
Project switching	Adjudication on a project can be suspended and then resumed
Multi-card support	Multi-card ballots, both physical and DRE, are supported
RCV	Rank choice voting is now supported
Improved Adjudication Stop/Resume	The resume function has been made more robust
Remote Administrator	Adjudication Administrator can perform tasks on a remote client machine, rather than the server
Write-in improvements	Master list of qualified write-ins is managed by Election Event Designer
	Admin can add a new write-in on the fly after the project has been created. Write-ins will be added to master list and will be synchronized for all adjudicators.
	Ability to prevent a ballot from being completed until all write-ins are resolved.

Feature	Details
Simultaneous display of ballot image and Auditmark	The Adjudicator can see the AuditMark alongside the image of the ballot being adjudicated.

Table 2.1: Adjudication Change Notes

2.1.2 Automated Test Deck Generator

Feature	Details
General usability improvements	Active project name displayed in the application window. Only projects in Ready for Election phase can be opened in the application. User-defined PDF names used by the application instead of Internal Machine IDs.

Table 2.2: Automated Test Deck Generator Change Notes

2.1.3 Election Data Translator

Feature	Details
Mapping external formats to EDT import spreadsheet	Ability to extract available election definition data from GEMS 1.5 and reformat it into EDT import spreadsheet. Ability to extract RTF information from GEMS 1.5 and include it along with EDT import spreadsheet. Ability to extract available election definition data from WinEDS export XML files and reformat it into EDT import spreadsheet. Ability to extract available election definition data from REYDI import files and reformat it into EDT import spreadsheet.
Support for Provisional and Challenge voting	Support for Conditional Voting Settings in the import data format
Consolidation per Ballot Group	Ability to indicate which Ballot Groups should have their ballots consolidated and vice versa

Feature	Details
Support for Activation Codes	Ability to import and export Voter Activation Codes as required for ICX
Simplification of export process	Reduction of export options to all information types and translations only
Partial import	Ability to import subsets of data using the application: New languages and translations, template assignment, and tabulators.
WinEDS Mapper update	WinEDS Mapper extended to handle new machine assignments as a result of integration between WinEDS and ICX.
ICX styling support	Modifications to Contest and Contest Heading tables to allow enhance styling capabilities for ICX.

Table 2.3: Election Data Translator Change Notes

2.1.4 Election Event Designer™

Feature	Details
Bulk modification of election definition objects	Ability to export various election definition objects, have their values modified, and imported back into the application
New ballot content generation algorithm	Improvement in performance and creation of ballot objects when advancing to Election Project Styling phase
Consolidation per Ballot Group	Ability to indicate which Ballot Groups should have their ballots consolidated and vice versa
Support for activation codes	Ability to manage Voter Activation Codes for ICX
Introduction of election signature	Automatically created key security and election identification element for the Voter Activation process for every election project
Extended support for QR ballots	ICE election files extended to contain QR code information
	ICP election files extended to contain QR code information
Support for languages with ligatures	Ability to enter text for languages with ligatures (Bengali, Hindi, Arabic, etc)
Common card consolidation	Ability to configure how common cards are consolidated.
Ballot name and ID templates	Ability to create a convention for the ballot ID, artwork file name and description.
Production of ballot sets	Ability to generate one or more ballots without generating all ballots in the election project.
New ICX election file	Application produces election definition in final form for the ICX voting application.
New ICX configuration file	Ability to produce and modify a configuration file for ICX.

Feature	Details
Programming of ICX devices	The application can now program the USB Flash Device with necessary resources used for setting up an ICX voting device.
Extended styling capabilities for ICX	Ballot Type, Translations, Contest and Contest Heading sections and dialogs have been modified in order to allow the EED User to style content for voting screens and printed artifacts. This also includes a new set of template keywords. New section for listing and modifying settings for Screen Ballots, for display on the ICX voting application. Existing Ballots section renamed to Ballot Cards, serving to separate settings from Screen Ballots. Ability to separately generate audio for proposition title and description for ICX. Content and Audio support for new Contest Review Title for ICX. Ability to preview a screen ballot when an ICX device is connected via USB.
Changes to write-in area detection	Modified the specification of available area for Write-in detection, which is passed through the election files to the optical scan tabulators.

Table 2.4: Election Event Designer™ Change Notes

2.1.5 EMS Systemwide

Feature	Details
Electoral Group Combinations renamed to Ballot Groups	Ballot Groups replace the old Electoral Group Combination term - no change to meaning or use
Windows authentication	EMS components to utilize Windows Authentication instead of SQL Server Authentication
Self-encrypting drives	Ability for system to utilize self encrypting drives as an additional security feature
OS upgrade	All components now running on combination of Windows 10, Windows Server 2012R2, with SQL Server 2016. Also included are scripts for security hardening procedures.
Automated installation and configuration procedure	Ability to automatically install and configure Windows-based components of D-Suite, depending on the configuration.

Table 2.5: EMS Systemwide Change Notes

2.1.6 ImageCast® Voter Activation

Feature	Details
Introduction of new component	New application which enables the activation of voter sessions at polling locations.
Workflow optimization	Improved workflow for programming voter cards to allow for faster processing at polling location.

Table 2.6: ImageCast® Voter Activation Change Notes

2.1.7 Results Tally and Reporting™

Feature	Details
EMS support for ICX results	Ability to import raw result files from ICX tabulators and store them in the EMS Cast Vote Records Results Store
Ability to transfer results between two instances of RTR	User can export result files from one instance of RTR and have them imported into another RTR instance, for the same election project

Feature	Details
Reporting by Split Precinct	Ability to break results down by precinct splits in Statement of Votes Cast and Cards Cast Reports
Reporting improvements	Ability to break-down results per precinct for consolidated ballots New report export providing information on what precincts each batch of results contains Ability to select multiple precincts for the Summary Report Ability to indicate in a project whether disabled contests and candidates should appear in the Election Summary and Statement of Votes Cast reports.
Common card consolidation	Ability to track precinct information for consolidated cards
Adjudication workflow update	Ability to bypass adjudication for early voting results
Refactoring of CVR Service	Refactoring of CVR Service to allow for improved performance and reliability during loading, adjudicating and publishing of results.
Refactoring of SSRS reporting	Extended Service to allow Adjudication to retrieve list of Qualified Write-ins, and add new Qualified Write-ins to the master list.
Risk Limiting Audit CVR export in tabular form	Refactoring of SQL Server Reporting Service based reports to allow for improved performance and more flexibility in extending reporting capabilities.
Daily Balancing report for result batches	The existing CVR export can now be generated in Excel format.
Update to workflow for adjudication for provisional results	A report indicating the date and time when each results batch was loaded into the EMS database. Ability to remove provisional votes into a separate results batch in order to allow for adjudication of standard results in a batch.

Table 2.7: Results Tally and Reporting™ Change Notes

2.1.8 Smart Card Helper Service

Feature	Details
Introduction of new component	New service which enables the programming of smart cards

Table 2.8: Smart Card Helper Service Change Notes

2.2 ImageCast® Central

Feature	Details
Installation Package	ICC now has a proper installation application
Scan from User Account	ICC can now be used with accounts that do not have Admin access, allowing for greater data security
Canon DR-M160II	ICC now supports the Canon DR-M160II scanner
RCV	Rank choice voting is now supported
TWAIN	The Kofax module has been removed from ICC and replaced with a TWAIN interface
Consistent Countback	An option has been added to force to ICC to overrun a preset number of ballots every time scanning stops mid-batch
Project Switching	Switching election projects in ICC has been simplified
Write-In Area Optimization	Improvements to Write-in Area detection.
OS upgrade	Application now runs on Windows 10

Table 2.9: ImageCast® Central Change Notes

2.3 ImageCast® X

Feature	Details
Open Primary support	Ability to enable voters to cast a ballot in an Open Primary election.
Smart Card support	Support for Poll Worker, Technician, and Voter smart cards.
Choice stylization - support for basic HTML tags	Ability to align the choice cell left, right or centre, along with support for font size, bold, italic and underline text.
Pausing/resuming AVS session and AVS help screen	Introduction of help screen for AVS that is used for pausing/resuming audio playback
Core DRE functionality	Ability to save results in cast vote record format.
Thermal Printer - Report printer	New thermal printer for the ICX voting application.
Thermal Printer - VVPAT	New VVPAT printer for the ICX voting application.
AVS VVPAT verification	Ability to verify the VVPAT for an accessible voter.
Vote simulator	Vote simulation for use during Logic & Accuracy Testing.
Multiple contests per column	Ability to display more than one contest on the screen.
Contest heading	Ability to display a heading for a single or a group of contests on the screen.

Feature	Details
Any size text and positioning for contest	Ability to align the contest cell left, right or centre, along with support for font size, bold, italic and underline text.
Static audio for non-TTS languages	Ability to playback audio for screen contents for languages that do not have Text-to-Speech support.
Support for new choice type None of these candidates	Ability to display and record votes for a choice which enables the voter to indicate they do not wish to cast a vote for any of the available choices.
Support for Rank Choice Voting	Ability to display an RCV contest and record votes during a session.
Straight Party voting	Ability to display a Straight Party ticket and have remaining partisan contests influenced.
OCR font for BMD	Printed QR Ballot now has human readable part printed in an OCR-friendly font.
Non-latin languages for BMD	Ability to print a voter's selection on the BMD printer in non-latin languages (e.g., Chinese)
Support for Legal BMD paper size	Ability to have a QR ballot printed on the Legal sized paper.

Table 2.10: ImageCast® X Change Notes