

June 6, 2014

Mr. Scott Gessler Secretary of State State of Colorado Department of State 1700 Broadway, Suite 200 Denver, CO 80290

RE: Proposed Rules Concerning Voting System Conditions for Use, May 29, 2014

Dear Secretary Gessler:

Hart InterCivic is pleased to submit the attached document to the Colorado Department of State with our comments concerning the latest proposed rules about voting system conditions for use. We appreciate the main goal of developing a single set of clear and concise administrative rules and eliminating redundancy whenever possible.

We have reviewed the proposed rules carefully, and we do have some concerns and comments which we hope will be valuable to the Department of State. We appreciate your careful consideration of our input. (Our comments are noted inline, using the Adobe PDF comment feature). They appear in the following locations:

P. 1, Line 15 P. 3, Line 12 P. 6, Line 19 P. 2, Line 9 P. 3, Line 15 P. 6, Line 31 P. 2, Line 13 P. 6, Line 1 P. 7, Line 4 P. 3, Line 10 P. 6, Line 12

Again, thank you for this opportunity to collaborate on the important task of continuously improving the rules concerning the use of election technology in the State of Colorado.

Sincerely,

Edward P. Perez

Director of Product Management

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Hart InterCivic Austin, Texas

Reference Copy – Hart InterCivic Comments to Proposed Rules Concerning Voting System Conditions for Use, May 29, 2014

For the full context in which the following comments are offered, please see the inline comments in the attached Adobe PDF. Comments are identified in the PDF by yellow "bubbles" at the pages and lines noted.

P. 1, Line 15

Hart InterCivic recommends that the language be amended to read, "The County must provide each accessible DRE voter a headset with an adjustable volume control." In Hart Voting System v. 6.2.1, not all DREs are equipped with the module for accessibility, and the rules should specify that it is intended to apply only to those DREs so equipped with accessibility features.

P. 2, Line 9

Hart InterCivic recommends adding clarifying language that specifies that these rules are intended to apply to desktop PC workstations on which voting system application software is installed.

P. 2, Line 13

Hart InterCivic recommends adding clarifying language that this rule is intended to apply to **system**-level hardware passwords that are **not** election-specific, and that are **not** part of the election-specific device passwords that may be included in election definitions that are programmed by a third party vendor. For additional context, see our comments to 20.5.2 sub-section (e), below, on page 3, lines 10 and 12.

P. 3, Line 10

Hart InterCivic recommends adding the word "county's," before "election management system," so that the sentence reads, "The voting system provider may not have administrative or user access to the county's election management system..."

Hart InterCivic <u>strongly</u> recommends deleting the words "*or election database*," as access to the database is required in order for the vendor to program elections for smaller counties that do not own, and do not wish to own, ballot programming software. If the words "*or election database*" words are not deleted, it would effectively foreclose Hart's ability to provide ballot programming services for Colorado counties, thereby creating a great fiscal and resource burden on the counties, as they would be required to purchase their own ballot programming software (BOSS). Hart currently provides ballot programming services to 33 counties in Colorado. This would be an enormous change to their budget, workflow, and general election administration practices.

Furthermore, the new proposed language in 20.5.2 sub-section (e) does not appear to align with the intent of the language in the original use conditions, as the original language in the use conditions appears to be more concerned with protecting access to *desktop PCs*, while restrictions on the hardware voting devices are adequately covered in other parts of the use conditions.

P. 3, Line 12

Hart InterCivic <u>strongly</u> recommends deleting the words "and device level passwords," as Colorado counties who use Hart's ballot programming service do not have the ability to change election-specific device-level passwords once their election has been programmed and their memory cards have been delivered. If these words are not deleted, it would effectively foreclose Hart's ability to provide ballot programming services for Colorado counties, thereby creating a great fiscal and resource burden on the counties, as they would be required to purchase their own ballot programming software (BOSS) and program their own ballots. Hart currently provides ballot programming services to 33 counties in Colorado. This would be an enormous change to their budget, workflow, and general election administration practices.

Furthermore, the new proposed language does not appear to align with the intent of the language in the original use conditions, as the original language in the use conditions appears to be more concerned with protecting access to desktop PCs, while restrictions on the hardware voting devices are adequately covered in other parts of the use conditions.

P. 3, Line 15

The intent of this rule is not clear to Hart, as it involves two different topics: prohibitions against connection to the Internet, and prohibitions against the use of Wi-Fi; those are not the same things. For example, 20.5.2 sub-section (g) below appears to allow the connection of voting system components via modem...does that include the possibility of using a broadband modem that functions over wireless public networks? Such connections could be accommodated by 20.5.2 sub-section (g), standing on its own, but 20.5.2 sub-section (f)would contradict that.

If the intent is to prohibit connection to the internet only, then we recommend striking the language prohibiting Wi-Fi connectivity, as that may contradict desired functionality that is permissible under subsection G.

If the intent is to prohibit *any* kind of wireless communications, then the language should simply refer to "*wireless communications*" in a sub-section separate from prohibitions against connecting to the Internet. Again, those are two separate issues.

P. 6, Line 1

Hart InterCivic recommends adding clarifying language stating the final authoritative backup copy on a write-once CD need not be generated directly from the Election Management workstation PC, as it is possible that not all EMS workstations are so equipped with a CD-writing component (or with the ability to write CDs, even if the component is installed). In other words, the language should clarify that "The County must export a backup copy of the election setup records immediately after downloading the final removable card or cartridge, and for retention purposes, the exported data must be stored on a read-only, write-once CD." Such language would permit the usage of a different workstation to actually create the backup CD, if necessary.

P. 6, Line 12

Hart InterCivic recommends deleting the word "Pause," as voting systems certified to federal standards prior to 2005 might not have the functional capability to "pause," strictly speaking. On the Hart Voting System that is currently certified in Colorado, users can prevent further advancement on an audio ballot by not turning the SELECT wheel on the eSlate DRE, but that that is not a "pause," strictly speaking.

P. 6, Line 19

Unless the Department of State specifically intends to require counties to purchase true UPS devices (which can be quite heavy and costly), Hart InterCivic questions whether "uninterruptible power supply" is the preferred wording. Are backup battery supplies that are sufficient to sustain continuous operation for a minimum of two hours acceptable, for example? Or does the Dept. of State want to actually require corded UPS devices that must be plugged into an outlet on the wall? UPS devices would create additional burdens in terms of cost, storage space in the warehouse, wall outlets required, and the total weight of equipment deployed to a voter service center.

P. 6, Line 31

Unless the Department of State specifically intends to require counties to purchase true UPS devices (which can be quite heavy and costly), Hart InterCivic questions whether "uninterruptible power supply" is the preferred wording. Are backup battery supplies that are sufficient to sustain continuous operation for a minimum of two hours acceptable, for example? Or does the Dept. of State want to actually require corded UPS devices that must be plugged into an outlet on the wall? UPS devices would create additional burdens in terms of cost, storage space in the warehouse, wall outlets required, and the total weight of equipment deployed to a voter service center.

P. 7, Line 4

The intent of this rule and the term "override key" is not clear to Hart. Is the intent of the rule to require polling official assistance for a voter that wishes to cast a ballot that has been rejected by the scanner? For example, if a voter over-votes a ballot, and the scanner rejects the ballot as mismarked, is the intent of the rule to require that the voter does not have the ability to override the rejection and cast the ballot without further assistance? If so, then Hart InterCivic recommends the use of more generic language that is less likely to have the unintended effect of requiring a very specific hardware implementation.

If our understanding of the intent of the rule is correct, then you might include language such as, "The county must program each optical scanner in a manner such that voters who wish to override ballot rejections and cast rejected ballots 'as-is' shall be required to have the assistance of a polling official to execute the override."

If such clarifying language is not substituted, the proposed rule could be read as requiring optical scanner machines to override ballot rejections only through the use of a separate physical key (which is hopefully not the intention, because certainly not all machines are designed in such a manner).

Working Draft of Proposed Rules

Office of the Colorado Secretary of State Election Rules 8 CCR 1505-1

May 29, 2014

Disclaimer:

The following is a working draft concerning Rule 20 (County Security Procedures). The Secretary values your input and is seeking feedback about the proposed revisions before a formal notice of rulemaking.

Please send your feedback by June 6, 2014. Please reference the specific page and line number in your comments. We will consider all comments submitted by this date for inclusion in the official rulemaking draft.

Please note the following formatting key:

Font effect	Meaning
Sentence case	Retained/modified current rule language
SMALL CAPS	New language
Strikethrough	Deletions
Italic blue font text	Annotations

Amendments to Rule 20.1:

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- 2 20.1 The county clerk-must submit its annual security plan on the form prescribed by the Secretary of State in accordance with section 1-5-616(5), C.R.S.
- 4 Amendments to Rule 20.2.2, regarding general requirements concerning chain-of-custody:
- The county must maintain and document the UNINTERRUPTED chain-of-custody for each voting device FROM THE INSTALLATION OF TRUSTED BUILD TO THE PRESENT, throughout the county's ownership or leasing of the device. For voting systems ACQUIRED BEFORE MAY 28, 2004, THE COUNTY MUST MAINTAIN AND DOCUMENT UNINTERRUPTED CHAIN-OF-CUSTODY FOR EACH VOTING DEVICE FROM THE SUCCESSFUL COMPLETION OF ACCEPTANCE TESTING CONDUCTED ACCORDING TO RULE 20.8.4.
- Amendments to Rule 20.3.1(e), regarding physical locking mechanisms and seals for DREs and ballot marking devices:
 - (e) These same procedures also apply to the Judge's Booth Controller (JBC) unit for the Hart InterCivic System. THE COUNTY MUST PROVIDE EACH VOTER A HEADSET WITH AN ADJUSTABLE VOLUME CONTROL.

I	Amena	dments to Rule 20.4.1:				
2	20.4	Individ	duals wi	ith acce	ss to keys, door codes, and vault combinations-	
3 4 5		20.4.1	in the	securi	s with access to areas addressed in Rule 20.4.3, the county must state ty plan each employee's title and the date of the the criminal heck. [Section 24-72-305.6, C.R.S.]	
6	Amena	lments t	o Rule	20.5.2,	regarding internal controls for the Voting System:	
7 8		20.5.2			the access controls discussed in Rule 20.4, the county must change and limit access to the following areas:	
9 10 11 12			(a) C	year p	are. The county must change all software passwords once per calendar rior to the first election. This includes any boot or startup passwords, as well as any administrator and user passwords and remote device ords.	
13 14 15 16 17			(b) C	calend key ca	vare. The county must change all hardware passwords once per lar year prior to the first election. This includes any encryption keys, and tools, supervisor codes, poll worker passwords on smart cards, teys, tokens, and voting devices themselves as it applies to the specific in.	
18 19 20 21 22 23 24 25 26 27			(c)	The comanage passwer passwer provide passwer with a	ord Management USER PRIVILEGES FOR HARDWARE COMPONENTS. Dunty must limit access to the administrative passwords to the election gement software to two employees. The county must limit access to ords for all components of the election software and PRIVILEGES AND YORDS FOR hardware COMPONENTS OF THE VOTING SYSTEM to two VISOR JUDGES AND NO MORE THAN TEN employees. The county may le an additional ten employees with access to the administrative ords for the software components, and an additional ten employees eccess to the administrative passwords for the hardware components voting system.	
28 29			(D)		NISTRATIVE AND USER ACCOUNTS FOR ELECTION MANAGEMENT M AND ELECTION DATABASES.	
30 31 32				(1)	THE COUNTY MAY USE THE ADMINISTRATIVE USER ACCOUNT ONLY TO CREATE INDIVIDUAL USER ACCOUNTS FOR EACH ELECTION DATABASE.	
33 34 35 36				(2)	THE COUNTY MUST CREATE INDIVIDUAL USER ACCOUNTS THAT ARE ASSOCIATED AND IDENTIFIED WITH EACH INDIVIDUAL AUTHORIZED USER OF THE ELECTION MANAGEMENT SYSTEM OR ELECTION DATABASE.	

1 2 3 4 5		ACCOUNT WITH A UNIQUE PASSWORD KNOWN ONLY TO EACH INDIVIDUAL USER. AUTHORIZED USERS MUST ACCESS THE ELECTION MANAGEMENT SYSTEM AND ELECTION DATABASE USING HIS OR HER INDIVIDUAL USER ACCOUNT AND UNIQUE PASSWORD.
6 7		(4) THE COUNTY MAY GRANT ADMINISTRATIVE PRIVILEGES TO NO MORE THAN TEN INDIVIDUAL USER ACCOUNTS PER ELECTION.
8	(E)	The voting system provider may not have an administrative or application user/operator account, or administrative account access to the accounts. OR
9 10		USER ACCESS TO THE LECTION MANAGEMENT SYSTEM ELECTION
11 12		DATABASE. IF A VENDOR PROGRAMS THE ELECTION, THE COUNTY MUST
13		CHANGE THE ADMINISTRATOR, USER, AND EVICE-LEVEL PASSWORDS BEFORE CONDUCTING THE LOGIC AND ACCURACY TEST.
14 15 16	(d) (F)	Internet Access. The county must never MAY NOT connect or allow a connection of any voting system component to the Internet The ELECTION MANAGEMENT SYSTEM WORKSTATION IS EQUIPPED WITH WI-FI CAPABILITY
10 17		OR A WIRELESS DEVICE, THE COUNTY MUST DISABLE THE WIRELESS
18		CONNECTIVITY.
19	(e) (G)	Modem Transmission. The county must never MAY NOT connect any
20		component of the voting system to another device by modem-except for the
21		vote tally software. This prohibition does not apply to voting system
22		COMPONENTS THAT MUST COMMUNICATE BY MODEM WITH THE ELECTION
23		MANAGEMENT SYSTEM.
24	(f)	Remote voter service and polling centers. At remote voter service and
25 26		polling centers, the county may use modem functions of optical scanners and DREs only for the purpose of transmitting unofficial results.
27	(e) (H)	Authorized Employees. The county must include in its security plan each
28	(8) (11)	employee's THE title and the date of background checks for employees EACH
29		EMPLOYEE with access to any of the areas or equipment set forth in this Rule.
30		Each-THE county must maintain a storage facility access log that details
31		employee name, date, and time of access to the storage facility in which the
32		software, hardware, or components of any voting system are maintained. If
33		access to the storage facility is controlled by use of key card or similar door
34		access system that is capable of producing a printed paper log including the
35		person's name and date and time of entry, such a log must meet the
36		requirements of this Rule. [Section 24-72-305.6, C.R.S.]
37	Amendments to Rules	20.8.4 and 20.8.5, regarding equipment maintenance procedures:
38	20.8.4 Upon c	completion of any maintenance, the county must verify or reinstate the trusted
39		and conduct a full acceptance test of equipment that must, at a minimum,

1 2 3 4 5	election in which an employee(s) must cast a minimum of five ballots on the device to ensure tabulation of votes is working correctly. The county must maintain all documentation of the results of the acceptance testing on file with the specific device.		
6 7 8	20.8.5 The Secretary of State will annually inspect county maintenance AND CHAIN-OF-CUSTODY records and verify THE INTEGRITY OF trusted build installation—on a randomly selected basis.		
9	Rule 20.9.3(d) formatting correction:		
10 11 12	(D) (D) If a seal is broken or chain-of-custody cannot be verified IS UNVERIFIABLE, the county clerk must investigate, document his or her findings, and report the incident to the Secretary of State, as appropriate.		
13	New Rule 20.11(d), regarding VVPAT security:		
14 15 16	(D) IF THE VVPAT IS EXTERNAL, THE COUNTY MUST SECURE THE CONNECTION BETWEEN THE VVPAT AND THE DRE WITH TAMPER-EVIDENT SEALS, AND MUST MAINTAIN CHAIN-OF-CUSTODY LOGS.		
17	Amendments to Rule 20.11.2:		
18 19	20.11.2 Anonymity. The designated election official must implement measures to protect the anonymity of voters choosing to vote on DREs.		
20	(a) Measures to protect anonymity include:		
21 22 23	(1) The county may not keep any record indicating the order in which people voted on the DRE, or which VVPAT record is associated with the voter.		
24 25 26 27	(2) When more than one DRE is available at a voting location, the COUNTY MUST, TO THE EXTENT PRACTICABLE, ALLOW THE voter must be given the choice as to which TO CHOOSE THE DRE they would like HE OR SHE WISHES to vote on, to the extent practicable.		
28 29 30 31 32 33 34	(b) The county clerk must remove the date/time stamp from any report or export generated from an electronic pollbook. The county clerk may not use this field as a sort method. The county clerk must randomly assign any Record ID, Key ID, or Serial Number stored in the database of votes. The County clerk may not release a report generated from SCORE that includes a date and time stamp that could potentially identify a voter who cast a specific ballot.		

1 2 3 4	(c)	At no time may an election official simultaneously access a VVPAT and the list of voters. Examination of AT LEAST TWO ELECTION JUDGES MUST EXAMINE the VVPAT record must be performed by at least two election officials.
5 6 7	(D)	THE COUNTY MUST ARRANGE VOTER SERVICE AND POLLING CENTER DRES IN A MANNER THAT PREVENTS ELECTION JUDGES AND OTHER VOTERS FROM OBSERVING HOW A DRE VOTER CASTS HIS OR HER BALLOT.
8	Repeal of Rule 20.11	1.3(c), regarding VVPAT storage:
9 10	(c)	A master catalog must be maintained for the election containing the complete total number of VVPAT spools used in the election.
11	New Rule 201.71:	
12	20.17 VOTING SYST	TEM CONDITIONS FOR USE
13 14	20.17.1 AS DE	The county must use the voting system only on a closed network fined in Rule $21.1.6\mathrm{or}$ in a standalone fashion.
15 16 17		THE COUNTY MUST USE ITS ELECTION MANAGEMENT SYSTEM AS DEFINED IN 21.1.9 OR OTHER EXTERNAL SOLUTION FOR THE ABSTRACT OF VOTES CAST TO THE SECRETARY OF STATE UNDER SECTION 1-10-103(1), C.R.S.
18	20.17.3	Access logs.
19 20 21	(A)	IN ADDITION TO THE AUDIT LOGS GENERATED BY THE ELECTION MANAGEMENT SYSTEM, THE COUNTY MUST MAINTAIN ACCESS LOGS THAT RECORD THE FOLLOWING:
22 23 24		(1) THE DATE, TIME, AND USER NAME FOR EACH INSTANCE THAT A USER ENTERS OR EXITS THE SYSTEM OR THE SYSTEM'S REPORT PRINTING FUNCTIONS; AND
25 26 27		(2) MODIFICATIONS TO THE SYSTEM'S HARDWARE, INCLUDING INSERTION OR REMOVAL OF REMOVABLE STORAGE MEDIA, AS DEFINED IN RULE 21.1.15, OR CHANGES TO HARDWARE DRIVERS.
28 29 30 31 32	(B)	THE COUNTY MAY CREATE AND MAINTAIN THE ACCESS LOGS IN THE MANNER THE COUNTY DEEMS MOST SUITABLE, INCLUDING KEY STROKE RECORDING SOFTWARE, VIDEO SURVEILLANCE RECORDINGS, MANUALLY OR ELECTRONICALLY WRITTEN RECORDS, OR A COMBINATION OF THESE METHODS.

1 2 3		THE COUNTY MUST CREATE A BACKUP COPY OF THE ELECTION SETUP RDS ON A READ-ONLY, WRITE-ONCE CD, IMMEDIATELY AFTER DOWNLOADING INAL REMOVABLE CARD OR CARTRIDGE.
4 5	(A)	THE COUNTY MUST IDENTIFY THE MASTER DATABASE NAME AND DATE OF ELECTION ON THE LABEL OF THE BACKUP CD.
6 7 8	(B)	THE COUNTY MUST STORE THE BACKUP CD IN A SEALED CONTAINER. TWO ELECTION JUDGES OF DIFFERENT PARTY AFFILIATIONS MUST SIGN AND DATE ENTRIES TO THE CHAIN-OF-CUSTODY LOG FOR THE SEALED CONTAINER.
9	20.17.5	DREs.
10	(A)	THE COUNTY'S ELECTION JUDGES MUST:
11 12 13		(1) INSTRUCT VOTERS WHO USE THE DRE AUDIO BALLOT FEATURE ON HOW TO PAUS EPEAT, AND ADVANCE AUDIO PLAYBACK OF BALLOT INSTRUCTIONS OR TEXT;
14 15		(2) TEST THE VVPAT PRINTER IMMEDIATELY AFTER CHANGING THE VVPAT PAPER; AND
16 17 18		(3) LOCK AND RE-SEAL THE VVPAT CANISTER, AND MAKE APPROPRIATE ENTRIES ON THE VVPAT CHAIN-OF-CUSTODY LOG, BEFORE VOTING RESUMES ON THE DRE.
19 20 21	(B)	THE COUNTY MUST CONNECT DRES TO INTERRUPTIBLE POWER SUPPLIES SUFFICIENT TO SUSTAIN CONTINUOUS OPERATION FOR A MINIMUM OF TWO HOURS IN THE EVENT OF POWER LOSS.
22 23	(C)	THE COUNTY MUST MAINTAIN LOGS INDICATING ADMINISTRATOR FUNCTION USE.
24	20.17.6	OPTICAL SCANNERS AS DEFINED IN RULE 21.1.13:
25 26 27 28	(A)	WHEN ISSUING BALLOTS, THE COUNTY MUST PROVIDE IN-PERSON VOTERS WITH A SECRECY SLEEVE SUFFICIENT TO CONCEAL A VOTER'S MARKED BALLOT FROM OTHERS IN THE POLLING LOCATION, INCLUDING ELECTION JUDGES.
29 30	(B)	THE COUNTY MUST RECORD THE OPTICAL SCANNER SERIAL NUMBER ON ALL CHAIN-OF-CUSTODY LOGS AND REPORTS GENERATED BY THE DEVICE.
31 32 33	(C)	THE COUNTY MUST CONNECT EACH OPTICAL SCANNER TO SUINTERRUPTIBLE POWER SUPPLIES SUFFICIENT TO SUSTAIN CONTINUOUS OPERATION FOR A MINIMUM OF TWO HOURS IN THE EVENT OF POWER LOSS

1 2		(D)	THE COUNTY MUST MAINTAIN LOGS INDICATING ADMINISTRATOR FUNCTION USE.
3 4		(E)	THE COUNTY MUST PROGRAM EACH OPTICAL SCANNER TO REQUIRE AN OVERRIDE KEY R BALLOTS THAT ARE REJECTED BY THE SCANNER.
5	20.18	ES&S VOTING	G SYSTEM CONDITIONS
6 7 8			IF THE COUNTY MUST PROVIDE LANGUAGE MINORITY ASSISTANCE UNDER ON 203 OF THE VOTING RIGHTS ACT (42 U.S.C. §§ 1973 to 1973bb-1), IT MAY SE AN ES&S VOTING SYSTEM.
9		20.18.2	DRES. THE COUNTY MAY ONLY USE THE NINE INCH SCREEN ON THE VVPAT.
10 11 12			FOR OPTICAL SCANNERS WITH A ZIP DISK DRIVE, THE COUNTY MUST SAVE THE VOTE RECORDS FOR EACH BATCH OF TABULATED BALLOTS TO A ZIP DISK E SCANNING THE NEXT BATCH.
13 14 15	20.19	VVPAT, IT M	ONDITIONS. IF A COUNTY SHORTENS A LENGTHY CANDIDATE NAME ON THE IUST PROVIDE PRINTED NOTICE OF THE CHANGE TO VOTERS AT THE VOTER POLLING CENTER.
16	20.20	SEQUOIA DRE	ECONDITIONS
17 18 19			THE COUNTY MUST ADD CLARIFYING TEXT TO THE DISPLAY SCREEN DURING VPAT REVIEW PROCESS THAT INSTRUCTS THE VOTER TO REVIEW HIS OR HER OT CHOICES.
20 21		20.20.2 DURIN	THE COUNTY MUST LOCK THE ACTIVATE BUTTON TO PREVENT ITS USE G AN ELECTION.
22 23		20.20.3 FILE W	A COUNTY MAY NOT MODIFY THE SCREEN DISPLAY USING AN OVERRIDE.INITHOUT APPROVAL FROM THE SECRETARY OF STATE.