

Draft Requirements by Voting Activity for Next VVSG

Version 1 - 12/12/17

1 Election Programming

Election programming is the process by which central election officials use election databases and manufacturer system software to logically define the voter choices associated with the contents of the ballots. There are significant variations among the election laws of the 50 states with respect to permissible ballot contents, voting options, and the associated ballot counting logic.

The 2007 TGDC version of certain requirements all applied to 'EMS', which is now broken out into 'Election Definition Device' and 'Tabulator'.

1-A Election definition device, ballot definition

The election definition device SHALL provide for the logical definition of the ballot, including the definition of the number of allowable votes for each contest.

Applies to: Election definition device

Source: [VSS2002] I.2.3.2.a

1-A.1 Election definition device, ballot definition details

The election definition device SHALL be capable of collecting and maintaining

- a. Offices and their associated labels and instructions;
- b. Candidate names and their associated labels; and
- c. Ballot questions and their associated text.

Applies to: Election definition device

Source: [VSS2002] I.2.3.1.1.1.b

1-B Election definition device, political and administrative subdivisions

The election definition device SHALL provide for the logical definition of political and administrative subdivisions, where the list of contest choices or contests varies between precincts.

Applies to: Election definition device

Source: [VSS2002] I.2.2.6.a and I.2.3.2.b

1-C Election definition device, election districts

The election definition device SHALL enable central election officials to define multiple election districts.

Applies to: Election definition device

Source: [VSS2002] I.2.2.6.a

1-D Election definition device, voting variations

The election definition device SHALL enable central election officials to define and identify contests, contest choices, candidates, and ballot questions using all voting variations indicated in the implementation statement.

Applies to: Election definition device

1-D.1 Election definition device, 1-of-M

In all systems, the election definition device SHALL allow the definition of contests where the voter is allowed to choose at most one contest choice from a list of contest choices.

Source: Implicit in [VSS2002]

1-D.2 Election definition device, yes/no question

In all systems, the election definition device SHALL allow the definition of contests where the voter is allowed to vote yes or no on a question.

Source: New requirement / clarification of [VSS2002] intent

1-D.3 Election definition device, indicate party affiliations and endorsements

In all systems, the election definition device SHALL allow the definition of political parties and the indication of the affiliation and/or endorsements of each contest choice.

Source: Implicit in [VSS2002]

1-D.4 Election definition device, primary elections, party-specific and non-party-specific contests

Election definition devices of the Primary elections device class SHALL support the definition of both party-specific and non-party-specific contests.

Applies to: Election definition device \wedge Primary elections device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

1-D.5 Election definition device, write-ins

Election definition devices of the Write-ins device class SHALL support the definition of contests that include ballot positions for write-in opportunities.

Applies to: Election definition device \wedge Write-ins device

Source: [VSS2002] I.2.4.3.1.d

1-D.6 Election definition device, straight party voting

Election definition devices of the Straight party voting device class SHALL be capable of defining the necessary straight party contest and recording the endorsements made by each party in the election definition to support the gathering and recording of votes for the slate of contest choices endorsed by a given political party.

Applies to: Election definition device \wedge Straight party voting device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

1-D.7 Election definition device, cross-party endorsement

Election definition devices of the Cross-party endorsement device class SHALL be capable of defining the necessary straight party contest and recording the endorsements made by each party in the election definition to support the gathering and recording of votes for the slate of contest choices endorsed by a given political party when a given contest choice is endorsed by two or more different political parties.

Applies to: Election definition device \wedge Cross-party endorsement device

Source: Clarification or extension of existing requirements

1-D.8 Election definition device, split precincts, define precincts and election districts

Election definition devices of the Split precincts device class SHALL support the definition of election districts and precincts in such a way that a given polling place may serve two or more election districts.

Applies to: Election definition device \wedge Split precincts device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

1-D.9 Election definition device, N-of-M voting

Election definition devices of the N-of-M voting device class SHALL be capable of defining contests where the voter is allowed to choose up to a specified number of contest choices ($N(r) > 1$, per Part 1:8.3 “Logic Model (normative)”) from a list of contest choices.

Applies to: Election definition device \wedge N-of-M voting device

Source: Added precision, based on [VSS2002] I.2.2.8.2, I.2.3.2.a and glossary

1-D.10 Election definition device, cumulative voting

Election definition devices of the Cumulative voting device class SHALL be capable of defining contests where the voter is allowed to allocate up to a specified number of votes ($N(r) > 1$, per Part 1:8.3 “Logic Model (normative)”) over a list of contest choices, possibly giving more than one vote to a given contest choice.

Applies to: Election definition device \wedge Cumulative voting device

Source: Added precision, based on [VSS2002] I.2.2.8.2, I.2.3.2.a and glossary

1-D.11 Election definition device, ranked order voting

Election definition devices of the Ranked order voting device class SHALL be capable of defining contests where the voter is allowed to rank contest choices in a contest in order of preference, as first choice, second choice, etc.

Applies to: Election definition device \wedge Ranked order voting device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

1-E Election definition device, respect system limits

The election definition device SHALL prevent the defining of any election that would cause the voting system to exceed design limits such as maximum number of contest choices in a contest, maximum number of contests on a ballot, etc.

Applies to: Election definition device

Source: New requirement

1-F Election definition accuracy

The election definition device SHALL record the election contests, contest choices, issues, and political and administrative subdivisions exactly as defined by central election officials.

Applies to: Election definition device

Source: [VSS2002] I.2.2.2.1.a / [VMSG2005] I.2.1.2.a

1-G Voting options accuracy

The election definition device SHALL record the options for casting and recording votes exactly as defined by central election officials.

Applies to: Election definition device

Source: Reworded from [VSS2002] I.2.2.2.1.b / [VMSG2005] I.2.1.2.b

1-H Election definition device, confirm recording of election definition

The election definition device SHALL verify (i.e., actively check and confirm) the correct recording of election definition data to the persistent storage of the device.

Applies to: Election definition device

Source: [VSS2002] I.3.2.3.1.c and e ([VMSG2005] I.4.1.3.1.c and e), expanded to include persistent storage

DISCUSSION

"Persistent storage" includes nonvolatile memory, hard disks, optical disks, etc.

1-I Election definition device, election definition distribution

The election definition device SHALL provide for the generation of master and distributed copies of election definitions as needed to configure each voting device in the system.

Applies to: Election definition device

Source: Reworded from [VSS2002] I.2.3.2.e

2 Ballot Preparation, Formatting, and Production

2-A Election definition device, define ballot styles

The election definition device SHALL enable central election officials to define ballot styles.

Applies to: Election definition device

Source: [VSS2002] I.2.2.6.c

2-A.1 Election definition device, auto-format

The election definition device SHALL be capable of automatically formatting ballots in accordance with the requirements for offices and contest choices qualified to be placed on the ballot for each political subdivision and election district.

Source: [VSS2002] I.2.3.1.1.1.a

2-A.2 Election definition device, include votable contests

The election definition device SHALL provide for the inclusion in a given ballot style of any contest in which the voter would be entitled to vote.

Source: Extrapolated from relevant requirements in [VSS2002]

2-A.3 Election definition device, exclude nonvotable contests

The election definition device SHALL provide for the exclusion from a given ballot style of any contest in which the voter would be prohibited from voting because of place of residence or other such administrative or geographical criteria.

Source: [VSS2002] I.2.3.2.c

DISCUSSION

In systems supporting primary elections, this would include the exclusion of party-specific contests that are not votable by the selected political party.

2-A.4 Election definition device, nonpartisan formatting

The election definition device SHALL uniformly allocate space and fonts used for each office, contest choice, and contest such that the voter perceives no contest choice to be preferred to any other.

Source: [VSS2002] I.2.3.1.2.c

2-A.5 Election definition device, jurisdiction-dependent content

The election definition device SHALL enable central election officials to add jurisdiction-dependent text, line art, logos and images to ballot styles.

Source: Reworded from [VSS2002] I.3.2.3.1.d

2-A.6 Election definition device, primary elections, associate configurations with parties

Election definition devices of the Primary elections device class SHALL support the association of different ballot configurations with different political parties.

Applies to: Election definition device \wedge Primary elections device

Source: Reworded from [VSS2002] I.2.3.1.1.1.d

DISCUSSION

In paper-based systems, open primaries have sometimes been handled by printing a single ballot style that merges the contests from all parties, instructing the voter to vote only in the contests applicable to a single party, and rejecting or discarding votes that violate this instruction. To satisfy the requirements for Primary elections device, the election definition device must be capable of associating different ballot configurations with different political parties.

2-A.7 Election definition device, ballot rotation

Election definition devices of the Ballot rotation device class SHALL support the production of rotated ballots and/or the activation of ballot rotation functions in vote-capture devices through the inclusion of relevant metadata in distributed election definitions and ballot styles.

Applies to: Election definition device \wedge Ballot rotation device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

2-A.8 Election definition device, split precincts, associate ballot configurations

Election definition devices of the Split precincts device class SHALL support the definition of distinct ballot configurations for voters from two or more election districts that are served by a given polling place.

Applies to: Election definition device \wedge Split precincts device

Source: Added precision, based on [VSS2002] I.2.2.8.2 and glossary

2-B Election definition device, ballot style distribution

The election definition device SHALL provide for the generation of master and distributed copies of ballot styles as needed to configure each voting device in the system.

Applies to: Election definition device

Source: Reworded from [VSS2002] I.2.2.6.d

2-B.1 Election definition device, ballot style identification

The election definition device SHALL generate codes or marks as needed to uniquely identify the ballot style associated with any ballot.

Applies to: Election definition device

Source: [VSS2002] I.2.3.1.1.1.e

DISCUSSION

In paper-based systems, identifying marks would appear on the actual ballots. DREs would make internal use of unique identifiers for ballot styles but would not necessarily present these where the voter would see them.

When different precincts share a common ballot style in a paper-based system, typically it is assumed that the ballots from the two precincts will be kept physically separate,

tabulated separately, and attributed to the correct precinct at the time of reporting—even in combined precincts where this imposes procedural overhead.

2-C Election definition device, reuse of definitions

The election definition device SHALL support retention, modification, and reuse of general districting/precinct definitions and ballot formatting parameters within the same election and from one election to the next.

Applies to: Election definition device
Source: [VSS2002] I.2.3.1.2.e and g

2-D Election definition device, ballot style protection

The election definition device SHALL prevent unauthorized modification of any ballot styles.

Applies to: Election definition device
Source: [VSS2002] I.2.3.1.2.f

2.1 Procedures required for correct system functioning

The requirements for voting systems are written assuming that these procedures will be followed.

Paper ballot production: Central election officials must verify that paper ballots are produced in accordance with manufacturer specifications.

Paper ballot production quality: Central election officials must ensure that paper ballots conform to manufacturer specifications for type of paper stock, weight, size, shape, size and location of field used to record votes, folding, bleed through, and ink for printing. ([VSS2002] I.2.3.1.3.1.c)

Paper ballot field alignment: Central election officials must ensure that the vote response fields can be properly aligned with respect to any ballot marking devices used. ([VSS2002] I.2.3.1.1.2.b)

Paper ballot timing mark alignment: Central election officials must ensure that timing marks align properly with the vote response fields. ([VSS2002] I.2.3.1.1.2.c)

3 Equipment Setup

4 Opening Polls

5 Casting

6 Closing Polls

7 Tabulation

8 Reporting