

# Principle 1 - High Quality Design

The voting system is designed to accurately, completely, and robustly carry out election processes.

## 1. Election Definition

### 1-A Election definition devices, ballot definition

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

Applies to: Election definition devices

Status:	under review
Updated:	12/21/17
Gap notes:	Reworded from VSS2002 I.2.3.2.a

#### 1-A.1 Election definition devices, ballot definition details

The election definition device MUST be capable of collecting and maintaining

- a. Contests 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 devices

Status:	under review
Updated:	12/21/17
Gap notes:	Reworded from VSS2002 I.2.3.1.1.1.b

### 1-B Election definition devices, administrative subdivisions

The election definition device MUST provide for the logical definition of administrative subdivisions, where the list contests varies between subdivisions.

Applies to: Election definition devices

Status:	under review
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Updated: 12/21/17  
Gap notes: Reworded from VSS2002 I.2.2.6.a and I.2.3.2.b

### 1-C Election definition devices, election districts

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

Applies to: [Election definition devices](#)

#### Discussion

An election district is generally associated with a contest in an election, e.g., a state is the district for the state senator contest.

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from VSS2002 I.2.2.6.a

### 1-D Election definition devices, identifiers

The election definition device MUST enable central election officials to associate a minimum of 3 identifiers each for administration subdivisions, election districts, contests, and candidates.

Applies to: [Election definition devices](#)

#### Discussion

This is based on the need to support cross-referencing of state-wide identifier schemes or schemes such as OCD-IDs with those used on a more local basis.

Status: under review  
Updated: 12/21/17  
Gap notes: New requirement based on NIST CDF work.

#### 1-D.1 Election definition devices, OCD-IDs

The election definition device MUST support the use of Open Civic Data Identifiers with administration subdivisions, election districts, contests, and candidates.

Applies to: [Election definition devices](#)

#### Discussion

An authoritative reference will need to be established, as well as uniform methods for associating OCD-IDs with contests and candidates.

Status: under review  
Updated: 12/21/17  
Gap notes: New requirement based on NIST CDF work

## 1-E Election definition devices, voting methods

The election definition device MUST enable central election officials to define and identify contests, contest choices, candidates, and ballot questions using all voting methods indicated in the manufacturer-provided implementation statement.

Applies to: [Election definition devices](#)

Status:	under review
Updated:	12/21/17
Gap notes:	New requirement

### 1-E.1 Election definition devices, 1-of-M voting method

When implementing the 1-of-M voting method, the election definition device MUST allow the definition of contests where the voter is allowed to choose at most one contest choice from a list of contest choices.

Applies to: [Election definition devices](#)

Status:	under review
Updated:	12/21/17
Gap notes:	new requirement / implicit in VSS2002

### 1-E.2 Election definition devices, yes/no questions

The election definition device MUST allow the definition of contests where the voter is allowed to vote yes or no on a question.

Applies to: [Election definition devices](#)

#### Discussion

This requirement concerns referenda/ballot questions with a yes or no voter choice.

Status:	under review
Updated:	12/21/17
Gap notes:	New requirement / clarification of VSS2002 intent

### 1-E.3 Election definition devices, multiple choice questions

The election definition device MUST allow the definition of contests where the voter is allowed to vote on one or more from a list of possible choices on a question.

Applies to: [Election definition devices](#)

## Discussion

This requirement concerns referenda/ballot questions that are multiple choice.

Status: under review  
Updated: 12/21/17  
Gap notes: New requirement / clarification of VSS2002 intent

### **1-E.4 Definition of parties and party affiliations and endorsements**

The election definition device MUST allow the definition of political parties and the indication of the affiliation and/or endorsements of each contest choice.

Applies to: [Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Implicit in VSS2002

### **1-E.5 Election definition devices, primary elections, party-specific and non-party-specific contests**

When implementing primary elections, the election definition device MUST support the definition of both party-specific and non-party-specific contests, with the capability to include both party-specific and non-party specific contests on the same ballot.

Applies to: [Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Added precision, based on VSS2002 I.2.2.8.2

### **1-E.6 Election definition devices, write-ins**

The election definition device MUST support the definition of contests that include ballot positions for write-in opportunities.

Applies to: [Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from VSS2002 I.2.4.3.1.d

### **1-E.7 Election definition devices, straight party voting**

When implementing straight party voting, the election definition device MUST 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 devices](#)

Status:	under review
Updated:	12/21/17
Gap notes:	Added precision, based on VSS2002 I.2.2.8.2

### **1-E.8 Election definition devices, cross-party endorsement**

When implementing cross-party endorsement, the election definition device **MUST** 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 devices](#)

Status:	under review
Updated:	12/21/17
Gap notes:	Clarification or extension of existing requirements in VVSG1.1

### **1-E.9 Election definition devices, define precincts and election districts**

The election definition device **MUST** 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 devices](#)

#### **Discussion**

This requirement addresses the capability to support the definition of split precincts, each split unique to a particular district, as well as the association of the split precincts with the precinct. This requirement goes further and also addresses the capability to support the definition of other configurations of precincts, such as combined precincts.

Status:	under review
Updated:	12/21/17
Gap notes:	Added precision, based on VSS2002 I.2.2.8.2

### **1-E.10 Election definition devices, N-of-M voting**

When implementing the N-of-M voting method, the election definition device **MUST** be capable of defining contests where the voter is allowed to choose up to a specified number of contest choices from a list of contest choices.

Applies to: [Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Added precision, based on VSS2002 I.2.2.8.2, I.2.3.2.a

### **1-E.11 Election definition devices, cumulative voting**

When implementing the cumulative voting method, the election definition device **MUST** be capable of defining contests where the voter is allowed to allocate up to a specified number of votes over a list of contest choices, possibly giving more than one vote to a given contest choice.

[Applies to: Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Added precision, based on VSS2002 I.2.2.8.2, I.2.3.2.a

### **1-E.12 Election definition devices, ranked choice voting**

When implementing the ranked choice voting method, the election definition device **MUST** 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 devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Added precision, based on VSS2002 I.2.2.8.2

### **1-F Election definition accuracy**

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

[Applies to: Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from VSS2002 I.2.2.2.1.a / VVSG2005 I.2.1.2.a

### **1-G Voting options accuracy**

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

[Applies to: Election definition devices](#)

Status: under review

Updated: 12/21/17  
Gap notes: Reworded from VSS2002 I.2.2.2.1.b / VVSG2005 I.2.1.2.b

### **1-H Election definition devices, confirm recording of election definition**

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

Applies to: [Election definition devices](#)

#### **Discussion**

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

Status: under review  
Updated: 12/21/17  
Gap notes: From VSS2002 I.3.2.3.1.c and e (VVSG2005 I.4.1.3.1.c and e), expanded to include persistent storage

### **1-I Election definition devices, election definition distribution**

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

Applies to: [Election definition devices](#)

Status: under review  
Updated: 12/21/17  
Gap notes: 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 MUST enable central election officials to define ballot styles.

Applies to: [Election definition device](#)

Status:	under review
Updated:	12/21/17
Gap notes:	Reworded from VSS2002 I.2.2.6.c

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

The election definition device MUST 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.

Applies to: [Election definition device](#)

Status:	under review
Updated:	12/21/17
Gap notes:	Reworded from [VSS2002 I.2.3.1.1.1.a

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

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

Applies to: [Election definition device](#)

Status:	under review
Updated:	12/21/17
Gap notes:	Extrapolated from relevant requirements in [VSS2002

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

The election definition device MUST 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 criteria.

Applies to: [Election definition device](#)

### Discussion



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

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from [VSS2002 I.2.3.2.c

#### **2-A.4 Election definition device, nonpartisan formatting – delete?**

The election definition device MUST support the uniform allocation of 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.

Applies to: [Election definition device](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from [VSS2002 I.2.3.1.2.c

Cross-reference to u n a reqs

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

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

Applies to: [Election definition device](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from [VSS2002 I.3.2.3.1.d

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

When implementing primary elections, the election definition device MUST support the association of different contests with different political parties.

Applies to: [Election definition device](#)

##### **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. The election definition device must therefore be capable of associating different contests with different political parties.

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from [VSS2002 I.2.3.1.1.1.d]

### **2-A.7 Election definition device, ballot rotation**

When implementing ballot rotation, the election definition device **MUST** 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](#)

Status: under review  
Updated: 12/21/17  
Gap notes: Added precision, based on [VSS2002 I.2.2.8.2]

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

When implementing split precincts, the election definition device **MUST** 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](#)

Status: under review  
Updated: 12/21/17  
VSS2002:  
Gap notes: Added precision, based on [VSS2002 I.2.2.8.2]

### **2-B Election definition device, ballot style distribution**

The election definition device **MUST** 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](#)

Status: under review  
Updated: 12/21/17  
VSS2002:  
Gap notes: Reworded from [VSS2002 I.2.2.6.d]

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

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

Applies to: [Election definition device](#)

#### Discussion

In paper-based systems, identifying marks would appear on the actual ballots. Electronic ballot markers would make internal use of unique identifiers for ballot styles but would not necessarily present these where the voter would see them. In both cases, the identifying mark could be also recorded in the cast vote record.

Status: under review  
Updated: 12/21/17  
Gap notes: Reworded from [VSS2002 I.2.3.1.1.1.e

### 2-C Election definition device, reuse of definitions

The election definition device MUST 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. offices

Applies to: [Election definition device](#)

Status: under review  
Updated: 12/21/17  
VSS2002:  
Gap notes: Reworded from [VSS2002 I.2.3.1.2.e and g

### 2-D Election definition device, ballot style protection

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

Applies to: [Election definition device](#)

Status: under review  
Updated: 12/21/17  
VSS2002:  
Gap notes: Reworded from [VSS2002 I.2.3.1.2.f