

Volume I, Appendix A

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Appendix A Glossary

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Glossary for Voting Systems

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4

This glossary contains terms from the VSS-2002 as well as the inclusion of additional terms needed to understand voting and related areas such as security, human factors, and testing. Each term includes a definition and its source as well as an association, where

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- Source is the source from which the definition originates. A list of these sources is found in section A.2.

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- Association is the domain for which the term applies, e.g., voting, testing, security. There may be multiple domains identified for a term. There is no relevance given to the order in which the domains are listed. A list of these associations is found in section A.3.

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17

At this time, a term may contain multiple definitions. The intent is to eventually select one definition per term, unless multiple definitions are necessary to convey the appropriate meanings of the term.

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Some of the terms in the VSS-2002 have been deprecated due to changes in voting systems, voting process and/or mandates in HAVA. A list of these deprecated terms is in section A.4 List of Deprecated Terms.

23

A.1 Glossary

24

A

25

26

Abandoned Ballot: Ballot that the voter did not cast into the ballot box or record vote on DRE before leaving the polling place. See also fled voter.

28

Association: voting

29

Source: no attribution

30

31

32

Absentee Ballot: Ballot prepared or designed for an absentee voter. Definition of an absentee ballot is jurisdiction dependent.

33

Association: voting

34

Source: no attribution

35

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40

Acceptance Testing: Examination of a voting system and its components by the purchasing election authority (usually in a simulated-use environment) to validate performance of delivered units in accordance with procurement requirements, and to validate that the delivered system is, in fact, the certified or qualified system purchased.

Appendix A Glossary

- 1 Association: testing, voting
2 Source: VSS
3
- 4 **Access Board:** Independent federal agency devoted to accessibility for people with
5 disabilities.
6 Association: human factors, HF: accessibility
7 Source: no attribution
8
- 9 **Accessibility:** Measurable characteristic that indicates the degree to which a system is
10 available to, and usable by, individuals with disabilities. The most common
11 disabilities include those associated with vision, hearing and mobility, as well as
12 cognitive disabilities. The HAVA also includes accessibility requirements for
13 Native American and Alaska Native citizens and alternative language access for
14 voters with limited English proficiency.
15 Association: human factors, HF: accessibility
16 Source: NIST HF Rpt, HAVA
17
- 18 **Accessible Voting Station (Acc-VS):** Voting Station equipped for individuals with
19 disabilities referred to in HAVA 301 (a)(3)(B)
20 Association: HF: accessibility, voting
21 Source: HAVA
22
- 23 **Accreditation:** (1) Formal recognition that a laboratory is competent to carry out specific
24 tests or calibrations or types of tests or calibrations. (2) Procedure by which an
25 authoritative body gives formal recognition that a body or person is competent to
26 carry out specific tasks.
27 Association: testing, standardization
28 Source: (1) NIST HB 150, (2) ISO Guide 2-6
29
- 30 **Accreditation Body:** (1) Authoritative body that performs accreditation. (2) An
31 independent organization responsible for assessing the performance of other
32 organizations against a recognized standard, and for formally confirming the
33 status of those that meet the standard.
34 Association: testing, conformity assessment
35 Source: (1) ISO 17000, (2) IEEE 1583
36
- 37 **Accuracy:** (1) Extent to which a given measurement agrees with an accepted standard for
38 that measurement. (2) Closeness of the agreement between the result of a
39 measurement and a true value of the particular quantity subject to measurement.
40 NOTE 1: Accuracy is a qualitative concept. NOTE 2: The term precision should
41 not be used for accuracy.
42 Association: testing
43 Source: (1) IEEE 1583, (2) VIM
44

Appendix A Glossary

1 **Accuracy for Voting Systems:** Ability of the system to capture, record, store,
2 consolidate and report the specific selections and absence of selections, made by
3 the voter for each ballot position without error. Required accuracy is defined in
4 terms of an error rate that for testing purposes represents the maximum number of
5 errors allowed while processing a specified volume of data.

6 Association: voting, testing

7 Source: VSS

8

9 **Adequate Security:** Security commensurate with the risk and the magnitude of harm
10 resulting from the loss, misuse, or unauthorized access to or modification of
11 information. See also risk assessment.

12 Association: computer security

13 Source: OMB A130

14

15 **Alternative Formats:** In the context of voting systems, the ballot or accompanying
16 information is said to be in an alternative format if it is in a representation other
17 than the written English normally displayed to non-disabled English-literate
18 voters. NOTE: The usual purpose of these formats is to provide accessibility to
19 voters with disabilities or those with limited English proficiency. Examples
20 include, but are not limited to, Braille, ASCII text, large print, recorded audio, and
21 electronic formats that comply with Part 1194 of the standards for Section 508 of
22 the Rehabilitation Act Amendments.

23 Association: HF: accessibility

24 Source: IEEE 1583, Section 508

25

26 **Alternative Language Voting Station (ALVS):** voting station designed to be usable by
27 voters who have limited English proficiency, i.e., cannot read English.

28 Association: HF: accessibility, voting

29 Source: no attribution

30

31 **Approval:** Permission for a product or process to be marketed or used for stated purposes
32 or under stated conditions. NOTE: Approval can be based on fulfillment of
33 specified requirements or completion of specified procedures.

34 Association: testing, conformity assessment

35 Source: ISO 17000

36

37 **Attestation:** Issue of a statement, based on a decision following review, that fulfillment
38 of specified requirements has been demonstrated. NOTE: The resulting statement
39 is also known as a statement of conformity.

40 Association: testing, conformity assessment

41 Source: ISO 17000

42

43 **Audio Ballot:** Voter interface which provides the voter with audio stimuli and allows the
44 voter to communicate intent to the voting system through vocalization or physical
45 actions. See also ballot.

Appendix A Glossary

1 Association: voting, human factors, HF: accessibility

2 Source: FL Statutes

3

4 **Audio-Tactile Interface (ATI):** Voter interface designed so as not to require visual
5 reading of a ballot. Audio is used to convey information to the voter and sensitive
6 tactile controls allow the voter to convey information to the voting system.

7 Association: HF: accessibility, voting

8 Source: no attribution

9

10 **Audit:** Systematic, independent, documented process for obtaining records, statements of
11 fact or other relevant information and assessing them objectively to determine the
12 extent to which specified requirements are fulfilled. NOTE: While audit applies
13 to management systems, assessment applies to conformity assessment bodies as
14 well as more generally.

15 Association: testing, conformity assessment, security

16 Source: ISO 17000

17

18 **Audit Trail:** Recorded information that allows election officials to view the steps that
19 occurred on the equipment included in an election to verify or reconstruct the
20 steps followed without compromising the ballot or voter secrecy.

21 Association: voting, security

22 Source: no attribution

23

24 **Audit Trail for DRE:** Paper printout of votes cast, produced by direct response
25 electronic (DRE) voting machines, which election officials may use to crosscheck
26 electronically tabulated totals.

27 Association: voting, security

28 Source: NASS

29

30 **Availability:** Ensuring timely and reliable access to and use of information.

31 Association: security

32 Source: 44 U.S.C.

33

34 B

35

36 **Ballot:** (1) Physical record of the selections made by a voter in all of the
37 races or contests in a particular election. Typically used in the context of hand-
38 counted paper, punched card, or optical mark-sense ballots. When the ballot is
39 recorded in electronic form, the term ballot image is preferred. (2) An official
40 presentation of all of the contests to be decided in a particular election. These
41 may be printed on the ballot (sense 1), printed on a ballot label (as used for
42 punched-card and mechanical-lever voting machines), presented on a computer
43 display screen, or in some alternative form such as audio. See also, audio ballot,
44 ballot image, video ballot, electronic voter interface.

Appendix A Glossary

1 Association: Voting

2 Source: no attribution

3

4 **Ballot Configuration:** Particular set of contests to appear on the ballot for a particular
5 election district, their order, the list of ballot positions for each contest, and the
6 binding of candidate names to ballot positions.

7 Association: voting

8 Source: no attribution

9

10 **Ballot Counter:** Counter in a voting device that counts the ballots cast in a single
11 election or election test.

12 Association: voting

13 Source: VSS

14

15 **Ballot Counting Logic:** Software logic that defines the combinations of voter choices
16 that are valid and invalid on a given ballot and that determines how the vote
17 choices are totaled in a given election. States differ from each other in the way
18 they define valid and invalid votes and in their vote-counting procedures.

19 Association: voting

20 Source: VSS

21

22 **Ballot Format:** One of any number of specific ballot configurations issued to the
23 appropriate precinct. At a minimum, ballot formats differ from one another in
24 content. They may also differ in size of type, graphical presentation, language
25 used, or method of presentation (e.g., visual or audio). Also referred to as ballot
26 style.

27 Association: voting

28 Source: VSS

29

30 **Ballot Image:** (1) Electronically produced record of all votes cast by a single voter. (2)
31 Record of all votes produced by a single voter. See also Cast Vote Record

32 Association: voting

33 Source: (1) VSS (2) no attribution

34

35 **Ballot Instructions:** The official instructional material presented with the ballot (sense
36 2) to the voter. In some contexts, this is in the form of an instructional poster in
37 the voting booth, in some contexts, as text on the ballot label, in any form,
38 presented to voters for expressing their selections in an election. This may be
39 printed on the ballot (sense 1), presented in audio form, posted in the voting
40 booth, printed on the ballot label or presented with the ballot presentation.

41 Association: voting

42 Source: no attribution

43

Appendix A Glossary

1 **Ballot Measure:** A contest on ballot where the voter may vote yes or no. This term is
2 typically used for referenda, amendments to state constitutions and tax questions,
3 but not for yes/no votes in judicial retention races.

4 Association: voting

5 Source: no attribution

6

7 **Ballot Preparation:** Process of using election databases or other means to select the
8 specific contests and questions to be contained in a ballot format and related
9 instructions; preparing and testing election-specific software containing these
10 selections; producing all possible ballot formats; and validating the correctness of
11 ballot materials and software containing these selections for an upcoming
12 election.

13 Association: voting

14 Source: VSS

15

16 **Ballot Position:** Abstract choice that is represented by a single line item where a vote
17 may be recorded in a ballot or ballot image.

18 Association: voting

19 Source: VSS

20

21 **Ballot Production:** Process of converting the ballot format to a medium ready for use in
22 the physical ballot production or electronic presentation.

23 Association: voting

24 Source: VSS

25

26 **Ballot Rotation:** Process of varying the order of the candidate names within a given
27 contest to reduce the impact of voter bias towards the candidate(s) listed first.

28 Association: voting

29 Source: VSS

30

31 **Ballot Set:** See ballot image.

32 Association: voting

33 Source: VSS

34

35 **Ballot Scanner:** Device used to read the data from a marksense ballot.

36 Association: voting

37 Source: VSS

38

39 **Ballot Style:** See ballot format.

40 Association: voting

41 Source: VSS

42

43 **Baseline:** Product configuration that has been formally submitted for review against the
44 VVSG, which thereafter serves as the basis for further development; and can be

Appendix A Glossary

1 changed and offered to jurisdictions only through formal change control and
2 requalification procedures (and/or recertification procedures where applicable).

3 Association: voting, testing

4 Source: VSS

5

6 C

7

8 **Calibration:** Set of operations that establish, under specified conditions, the relationship
9 between values indicated by a measuring instrument or measuring system, or
10 values represented by a material measure, and the corresponding known values of
11 a quantity intended to be measured.

12 Association: testing

13 Source: NIST HB 150

14

15 **Candidate:** Person contending in a race for office. A candidate may be explicitly
16 presented as one of the choices on the ballot or may be a write-in candidate.

17 Association: voting

18 Source: NIST HF Rpt

19

20 **Candidate Register:** Record that reflects the total votes cast for the candidate. This
21 record is augmented as each ballot is cast on a DRE or as digital signals from the
22 conversion of voted paper ballots are logically interpreted and recorded.

23 Association: voting

24 Source: VSS, IEEE 1583

25

26 **Canvass:** (1) Compilation of election returns and validation of the outcome that form the
27 basis of the official results by political subdivision. (2) Compilation of election
28 returns for validation and approval by the political subdivision of the outcome,
29 which form the basis for the official results.

30 Association: voting

31 Source: (1) VSS, IEEE 1583 (2) no attribution

32

33 **Cast Ballot:** Ballot in which voter has taken final action in the selection of candidates
34 and measures and submits the ballot to the appropriate jurisdiction.

35 Association: voting

36 Source: no attribution

37

38 **Cast Vote Record (CVR):** Permanent record of all votes produced by a single voter
39 whether in electronic or paper copy form. Used for counting votes. Also referred
40 to as ballot set or ballot image when used to refer to electronic ballots.

41 Association: voting

42 Source: (1) IEEE 1583

43

Appendix A Glossary

- 1 **Catastrophic System Failure:** Total loss of function or functions, such as the loss or
2 unrecoverable corruption of voting data or the failure of an on-board battery of
3 volatile memory.
4 Association: voting
5 Source: VSS
6
- 7 **Central Counting:** Counting of ballots in one or more locations selected by the election
8 authority for the processing or counting, or both, of ballots.
9 Association: voting
10 Source: IL Statutes
11
- 12 **Certification:** (1) Procedure by which a third party gives written assurance that a
13 product, process or service conforms to specified requirements. (2) Third-party
14 attestation related to products, processes, systems or persons. See also State
15 Certification and EAC Certification.
16 Association: testing, conformity assessment
17 Source: (1) ISO Guide 2-6, (2) ISO 17000
18
- 19 **Certification Testing:** Deprecated, replaced by State Certification. Note: This term is
20 being clarified with respect testing to State or Federal Standards. See also EAC
21 Certification.
22 Association: testing, conformity assessment, voting
23 Source: VSS
24
- 25 **Challenged Ballot:** Ballot provided to individuals whose eligibility to vote has been
26 questioned. Once voted, such ballots are not included in the tabulation until after
27 the voter's eligibility is confirmed. See also provisional ballot.
28 Association: voting
29 Source: VSS
30
- 31 **Checksum:** Computed value representing the sum of the contents of an instance of
32 digital data; used to check whether errors have occurred in transmission or
33 storage.
34 Association: security
35 Source: no attribution
36
- 37 **Claim of Conformance:** Statement by a vendor proclaiming that a specific product
38 conforms to a particular standard or set of standard profiles, a claim which is
39 verified or refuted by a testing authority.
40 Association: testing, conformity assessment
41 Source: no attribution
42
- 43 **Client:** Any person or organization that engages the services of a testing or calibration
44 laboratory.
45 Association: testing

Appendix A Glossary

1 Source: NIST HB 150

2

3 **Closed Primary:** Primary election in which voters receive a ballot listing only those
4 candidates running for office in the political party with which the voters are
5 affiliated, along with nonpartisan offices and ballot issues presented at the same
6 election.

7 Association: voting

8 Source: VSS

9

10 **Commercial Off-the-Shelf (COTS):** Commercial, readily available hardware devices
11 (which may be electrical, electronic, mechanical, etc.; such as card readers,
12 printers, or personal computers) or software products (such as operating systems,
13 programming language compilers, database management systems, subsystems,
14 components; software, etc.).

15 Association: IT

16 Source: VSS, IEEE 1583

17

18 **Common Industry Format (CIF):** Refers to the format described in ANSI/INCITS 354-
19 2001 "Common Industry Format (CIF) for Usability Test Reports.

20 Association: HF: usability

21 Source: ANSI 354

22

23 **Compliance point:** Identified, testable requirement.

24 Association: testing, conformity assessment

25 Source: no attribution

26

27 **Component:** (1) Element within a larger system; a component can be hardware or
28 software. For hardware, a physical part of a subsystem that can be used to
29 compose larger systems (e.g., circuit boards, internal modems, processors,
30 computer memory). For software, a module of executable code that performs a
31 well-defined function and interacts with other components. (2) Individual
32 elements or items that collectively comprise a device, e.g., circuit boards, internal
33 modems, processors, disk drives, and computer memory.

34 Association: IT

35 Source: (1) no attribution, (2) VSS

36

37 **Confidentiality:** (1) Prevention of unauthorized disclosure of information. (2) Preserving
38 authorized restrictions on information access and disclosure, including means for
39 protecting personal privacy and proprietary information.

40 Association: security.

41 Source: (1) IEEE 1583, (2) 44 U.S.C.

42

43 **Configuration Identification:** Element of configuration management, consisting of
44 selecting the configuration items for a system and recording their functional and
45 physical characteristics in technical documentation.

Appendix A Glossary

1 Association: testing, software engineering

2 Source: IEEE 1583

3

4 **Configuration Item:** Aggregation of hardware, software, or both that is designated for
5 configuration management and treated as a single entity in the configuration
6 management process.

7 Association: testing, software engineering

8 Source: IEEE 1583

9

10 **Configuration Management:** Discipline applying technical and administrative direction
11 and surveillance to identify and document functional and physical characteristics
12 of a configuration item, control changes to these characteristics, record and report
13 change processing and implementation status, and verify compliance with
14 specified requirements.

15 Association: testing, software engineering

16 Source: IEEE 1583

17

18 **Configuration Management Plan:** Document detailing the process for identifying,
19 controlling and managing various released items (code, hardware, documentation
20 etc.)

21 Association: testing, software engineering

22 Source: IEEE 1583

23

24 **Conformance:** see conformity

25 Association: testing, standardization

26 Source: no attribution

27

28 **Conformance Testing:** Process of testing an implementation against the requirements
29 specified in one or more standards. The outcomes of a conformance test are
30 generally a pass or fail result, possibly including reports of problems encountered
31 during the execution. Also known as conformity assessment.

32 Association: testing, standardization

33 Source: NIST HB 150

34

35 **Conformity:** Fulfillment by a product, process or service of specified requirements.

36 Association: testing, standardization

37 Source: ISO Guide 2-6

38

39 **Conformity Assessment:** Demonstration that specified requirements relating to a
40 product, process, system, person or body are fulfilled. See also testing, inspection,
41 certification, accreditation, conformity assessment bodies.

42 Association: testing, standardization

43 Source: ISO 17000

44

Appendix A Glossary

- 1 **Conformity Assessment Body:** Body that performs conformity assessment services.
2 NOTE: An accreditation body is not a conformity assessment body.
3 Association: testing, standardization
4 Source: ISO 17000
5
- 6 **Consensus:** General agreement, characterized by the absence of sustained opposition to
7 substantial issues by any important part of the concerned interests and by a
8 process that involves seeking to take into account the views of all parties
9 concerned and to reconcile any conflicting arguments.
10 Association: standardization
11 Source: ISO Guide 2-4
12
- 13 **Contest:** Decision to be made within an election, which may be a race for office or a
14 referendum, propositions and/or questions. A single ballot may contain one or
15 more contests.
16 Association: voting
17 Source: no attribution
18
- 19 **Count:** Process of totaling votes.
20 Association: voting
21 Source: VSS, IEEE 1583
22
- 23 **Counted Ballot:** Ballot that has been processed and whose votes are included in the
24 candidate and measures vote totals.
25 Association: voting
26 Source: no attribution
27
- 28 **Corrective Action:** Action taken to eliminate the causes of an existing deficiency or
29 other undesirable situation in order to prevent recurrence.
30 Association: testing
31 Source: NIST HB 143
32
- 33 **Cross Filing:** see Cross-party Endorsement.
34 Association: voting
35 Source: VSS
36
- 37 **Cross-party Endorsement:** Endorsement of a single candidate or slate of candidates by
38 more than one political party. The candidate or slate appears on the ballot
39 representing each endorsing political party. Also referred to as *cross filing*.
40 Association: voting
41 Source: VSS, IEEE 1583
42
- 43 **Cryptographic Key:** Value used to control cryptographic operations, such as decryption,
44 encryption, signature generation or signature verification.
45 Association: security

Appendix A Glossary

1 Source: NIST SP 800-63

2

3 **Cryptography:** Discipline that embodies the principles, means, and methods for the
4 transformation of data in order to hide their semantic content, prevent their
5 unauthorized use, or prevent their undetected modification.

6 Association: security

7 Source: NIST SP 800-59

8

9 **Cumulative Voting:** Practice where voters are permitted to cast as many votes as there
10 are seats to be filled. Voters are not limited to giving only one vote to a candidate.
11 Instead, they can put multiple votes on one or more candidates.

12 Association: voting

13 Source: VSS, IEEE 1583

14

15 D

16

17 **Data Accuracy:** (1) Data accuracy is defined in terms of ballot position error rate. This
18 rate applies to the voting functions and supporting equipment that capture, record,
19 store, consolidate and report the specific selections, and absence of selections,
20 made by the voter for each ballot position. (2) The system's ability to process
21 voting data absent internal errors generated by the system. It is distinguished from
22 data integrity, which encompasses errors introduced by an outside source.

23 Association: testing, security

24 Source: (1) VSS, (2) IEEE 1583

25

26 **Data Integrity:** Invulnerability of the system to accidental intervention or deliberate,
27 fraudulent manipulation that would result in errors in the processing of data. It is
28 distinguished from data accuracy that encompasses internal, system-generated
29 errors.

30 Association: security

31 Source: IEEE 1583

32

33 **Decertification:** Withdrawal of certification of voting system hardware and software.

34 Association: testing, conformity assessment

35 Source: HAVA

36

37 **Design Entity:** Component of a design, named and referenced uniquely, that is both
38 structurally and functionally different from other elements.

39 Association: software engineering

40 Source: IEEE 1583

41

42 **Design Entity Attributes:** Named characteristic or property of a design entity, which
43 provides a statement of fact about the entity. Attributes define the design entity
44 and not the design process.

Appendix A Glossary

1 Association: software engineering

2 Source: IEEE 1583

3

4 **Designating Authority:** Body established within government or empowered by
5 government to designate conformity assessment bodies, suspend or withdraw their
6 designation or remove their suspension from designation.

7 Association: testing, conformity assessment

8 Source: ISO 17000

9

10 **Designation:** Governmental authorization of a conformity assessment body to perform
11 specified conformity assessment activities.

12 Association: testing, conformity assessment

13 Source: ISO 17000

14

15 **Device:** Functional unit that performs its assigned tasks as an integrated whole.

16 Association: IT

17 Source: VSS

18

19 **Digital Signature:** Asymmetric key operation where the private key is used to digitally
20 sign an electronic document and the public key is used to verify the signature.

21 Digital signatures provide authentication and integrity protection.

22 Association: security

23 Source: SP 800-63

24

25 **Direct Record Electronic (DRE) Voting System:** Voting system that records votes by
26 means of a ballot display provided with mechanical or electro-optical components
27 that can be actuated by the voter, that processes the data by means of a computer
28 program, and that records voting data and cast vote records in internal and/or
29 external memory components. It produces a tabulation of the voting data stored in
30 a removable memory component and/or in printed copy.

31 Association: voting

32 Source: VSS, IEEE 1583

33

34 **Directly Verified:** Voting system that allows the voter to verify at least one
35 representation of his or her ballot with his/her own senses, not using any software
36 or hardware intermediary. Examples of a directly verified voting system include
37 DRE with a voter verified paper trail or marksense system. This is in contrast
38 with an indirectly verified voting system.

39 Association: voting, security

40 Source: no attribution

41

42 **Disability:** Disability means, with respect to an individual, (a) a physical or mental
43 impairment that substantially limits one or more of the major life activities of
44 such individual, (b) a record of such an impairment, or (c) being regarded as
45 having such an impairment.

Appendix A Glossary

1 Association: human factors, HF: accessibility

2 Source: ADA

3

4 **DRE Display:** Part of the DRE that displays the electronic record.

5 Association: security, voting

6 Source: no attribution

7

8 **DRE-VVPAT:** DRE voting system containing VVPAT capability. See also Direct
9 Record Electronic Voting System and Voter Verified Paper Audit Trail.

10 Association: security, voting

11 Source: no attribution

12

13 **Dynamic Voting System Software:** Software that changes over time once it is installed
14 on the voting equipment. See also voting system software.

15 Association: voting

16 Source: no attribution

17

18 E

19

20 **EAC:** Election Assistance Commission

21

22 **Early Voting:** Voter completes the ballot in person at a county office or other designated
23 polling site or ballot drop site prior to Election Day. The ballot is cast and not
24 retrievable. NOTE: Early voting is not the same as absentee voting. Also known
25 as Early In-Person Voting.

26 Association: voting

27 Source: electionline

28

29 **Election Coding:** See Election Programming.

30 Association: voting

31 Source: IEEE 1583

32

33 **Election Databases:** Data file or set of files that contain geographic information about
34 political subdivisions and boundaries, all contests and questions to be included in
35 an election, and the candidates for each contest.

36 Association: voting

37 Source: VSS, IEEE 1583

38

39 **Election Definition:** Abstract definition of the races and questions that may appear on
40 ballot forms.

41 Association: voting

42 Source: no attribution

43

Appendix A Glossary

1 **Election District:** Geographic area represented by a public official who is elected by
2 voters residing within the district boundaries. The district may cover an entire
3 state or political subdivision, may be a portion of the state or political subdivision,
4 or may include portions of more than one political subdivision.

5 Association: voting

6 Source: VSS, IEEE 1583

7

8 **Election Management System:** Set of processing functions and databases within a
9 Voting System that define, develop and maintain election databases, perform
10 election definition and setup functions, format ballots, count votes, consolidate
11 and report results, and maintain audit trails.

12 Association: voting

13 Source: VSS, IEEE 1583

14

15 **Election Officials:** Term used to designate the group of people associated with
16 conducting an election, including election personnel and poll workers.

17 Association: voting

18 Source: no attribution

19

20 **Election Programming:** Process by which election officials or their designees use voting
21 system software to logically define the ballot for a specific election.

22 Association: voting

23 Source: VSS, IEEE 1583

24

25 **Electronic Ballot Printer (EBP):** DRE-like device that fully prints paper-based ballots
26 with selected vote choices for tabulation by a separate ballot scanner.

27 Association: voting

28 Source: IEEE 1583

29

30 **Electronic Cast Vote Record (ECVR):** Deprecated, replaced by Cast Vote Record
31 (CVR).

32 Association: voting

33 Source: IEEE 1583

34

35 **Electronic Vote Capture System (EVCS):** Election system that encompasses DREs as
36 well as accessible ballot printers (ABPs) when they are combined with the ballot
37 scanner that processes the printed ballot. See also Voter Verified Paper Audit.

38 Association: voting

39 Source: IEEE 1583

40

41 **Electronic Voter Interface:** Subsystem within a DRE voting system which
42 communicates ballot information to a voter in video, audio or Braille form and
43 which allows the voter to select candidates and issues by means of vocalization or
44 physical actions.

45 Association: voting, Human factors, HF: accessibility

Appendix A Glossary

1 Source: FL Statutes

2

3 **Electronic Voting Machine:** Any system that utilizes an electronic component. Term is
4 generally used to refer to DREs. See also Voting Equipment, Voting System.

5 Association: voting

6 Source: NASS

7

8 **Electronically-Assisted Ballot Marker (EBM):** Machines that provide assistance to
9 voters who are visually impaired, who have difficulty reading English, or in other
10 cases where a voter has difficulty correctly marking by hand a preprinted paper
11 ballot that is to be counted in optical scan systems. The device marks, or helps to
12 mark selected vote choices on a previously inserted, preprinted paper ballot. The
13 machine then provides audio, tactile, or visual feedback to the voter on what
14 choices they have made on the ballot. The resulting ballots are later tabulated on
15 the same unit that processes ordinary hand-marked paper ballots.

16 Association: voting, human factors

17 Source: IEEE 1583

18

19 **Entity Relationship Diagram (ERD):** A data modeling technique that creates a
20 graphical representation of the entities, and the relationships between entities,
21 within an information system.

22 Association: software engineering

23 Source: IEEE 1583

24

25 **Error correction code:** Coding system that incorporates extra parity bits in order to
26 detect errors.

27 Association: security

28 Source: WordNet

29

30 **E-Voting:** (1) Term frequently used to refer to DREs and other types of electronic voting
31 equipment, but may be misleading as it implies remote access via a computer
32 network or the Internet. (2) Election system that allows a voter to record his or her
33 secure and secret ballot electronically. See also DRE, Electronic Voting Machine.

34 Association: voting

35 Source: (1) NASS, (2) Whatis.com

36

37

38 F

39

40 **Federal Information Processing Standard (FIPS):** Standard for adoption and use by
41 federal agencies that has been developed within the National Institute of
42 Standards and Technology (NIST) Information Technology Laboratory and
43 published by NIST, an part of the U.S. Department of Commerce.

44 Association: security, standardization

Appendix A Glossary

1 Source: no attribution

2

3 **Firmware:** Computer programs (software) stored in read-only memory (ROM) devices
4 embedded in the system and not capable of being altered during system operation.

5 Association: IT

6 Source: IEEE 1583

7

8 **Fled Voter:** Voter who has begun the process of using voting equipment to cast a ballot
9 and has exited the polling site without completing the casting of the ballot,
10 thereby leaving the voting equipment in a state in which election procedures must
11 be used to decide whether the fled voter's incomplete ballot will be cast before the
12 voting equipment is reset. See also abandoned ballot.

13 Association: voting

14 Source: no attribution

15

16 **Font:** Family or assortment of characters of a given size and style, e.g., 9-point Bodoni
17 modern. See type font.

18 Association: human factors, typography

19 Source: ANSI Dict.

20

21 **Functional Configuration Audit (FCA):** Exhaustive verification of every system
22 function and combination of functions cited in the vendor's documentation.
23 Through use the FCA verifies the accuracy and completeness of the system's
24 Voter Manual, Operations Procedures, Maintenance Procedures, and Diagnostic
25 Testing Procedures.

26 Association: testing, voting

27 Source: VSS, IEEE 1583

28

29 **Functional Test:** Test performed to verify or validate the accomplishment of a function
30 or a series of functions.

31 Association: testing

32 Source: VSS, IEEE 1583

33

34 G

35

36 **General Election:** Election in which voters, regardless of party affiliation, are permitted
37 to select persons to fill public office and vote on ballot issues. Where the public
38 office may be filled by a candidate affiliated with a political party or when
39 permitted by law, unaffiliated candidate and voters choose among the candidates.

40 Association: voting

41 Source: VSS, IEEE 1583

42

43 H

44

Appendix A Glossary

1 **Hash:** Algorithm that maps a bit string of arbitrary length to a fixed-length bit string.
2 Approved hash functions satisfy the following properties: (a) it is computationally
3 infeasible to find any input that map to any prespecified output, and (b) it is
4 computationally infeasible to find any two distinct inputs that map to the same
5 output.

6 Association: voting

7 Source: NIST SP 800-63

8

9 **HAVA:** Help America Vote Act of 2002.

10 Association: voting

11 Source: no attribution

12

13 **Human Computer Interaction:** Discipline concerned with the design, evaluation and
14 implementation of interactive computing systems for human use and with the
15 study of major phenomena surrounding them.

16 Association: human factors

17 Source: ACM SIGCHI

18

19 **Human Factors (or Ergonomics):** Scientific discipline concerned with the
20 understanding of interactions among humans and other elements of a system, and
21 the profession that applies theory, principles, data and methods to design in order
22 to optimize human well-being and overall system performance.

23 Association: human factors

24 Source: IEA

25

26 I

27

28 **Indirectly Verified:** Voting system that allows a voter to verify the ballot produced by
29 his or her vote only via hardware or software intermediary. An example of an
30 indirectly verified voting system is a touch screen DRE where the voter verifies
31 the ballot through the assistance of audio stimuli. This is in contrast to directly
32 verified voting systems.

33 Association: voting, security

34 Source: no attribution

35

36 **Implementation Conformance Statement:** See Implementation Statement.

37

38 **Implementation Statement:** Statement by a vendor indicating the capabilities, features,
39 and optional functions as well as extensions that have been implemented. Also
40 known as implementation conformance statement.

41 Association: testing

42 Source: no attribution

43

Appendix A Glossary

1 **Independent Testing Authority (ITA):** Deprecated, replaced by Voting System Testing
2 Laboratory. Organization certified by the National Association of State Election
3 Directors (NASSED) to perform qualification testing.

4 Association: testing, voting

5 Source: VSS

6

7 **Information Security:** Protecting information and information systems from
8 unauthorized access, use, disclosure, disruption, modification, or destruction in
9 order to provide integrity, confidentiality, and availability.

10 Association: security

11 Source: 44 U.S.C.

12

13 **Inspection:** Examination of a product design, product, process or installation and
14 determination of its conformity with specific requirements or, on the basis of
15 professional judgment, with general requirements. NOTE: Inspection of a process
16 may include inspection of persons, facilities, technology and methodology.

17 Association: testing, conformity assessment

18 Source: ISO 17000

19

20 **Integrity:** (1) Prevention of unauthorized modification of information. (2) Guarding
21 against improper information modification or destruction, and includes ensuring
22 information non-repudiation and authenticity.

23 Association: security

24 Source: (1) IEEE 1583, (2) 44 U.S.C.

25

26 K

27

28 **Key Management:** Activities involving the handling of *cryptographic keys* and other
29 related security parameters (e.g., passwords) during the entire life cycle of the
30 keys, including their generation, storage, establishment, entry and output, and
31 zeroization.

32 Association: security

33 Source: FIPS 140-2

34

35 L

36

37 **Logic and Accuracy Testing:** Testing of the tabulator setups of a new election definition
38 to ensure that the content correctly reflects the election being held (i.e., contests,
39 candidates, number to be elected, ballot styles, etc.) and that all voting positions
40 can be voted for the maximum number of eligible candidates and that results are
41 accurately tabulated and reported.

42 Association: voting, testing

43 Source: IEEE 1583

44

Appendix A Glossary

1 **Logical Correctness:** Condition signifying that, for a given input, a computer program
2 will satisfy the program specification (produce the required output).

3 Association: testing

4 Source: VSS, IEEE 1583

5

6 M

7

8 **Marksense:** System by which votes are recorded by means of marks made in voting
9 response fields designated on one or both faces of a ballot card or series of cards.

10 Marksense systems may use an optical scanner or similar sensor to read the
11 ballots. Also known as Optical Scan.

12 Association: voting

13 Source: VSS, IEEE 1583

14

15 **Measure Register:** Record that reflects the total votes cast for and against a specific
16 ballot issue. This record is augmented as each ballot is cast on a DRE or as digital
17 signals from the conversion of voted paper ballots are logically interpreted and
18 recorded.

19 Association: voting

20 Source: VSS, IEEE 1583

21

22 **Mechanical Lever Voting Machine:** Machine that directly records a voter's choices via
23 mechanical level-actuated controls into a counting mechanism that tallies the
24 votes without using a physical ballot.

25 Association: voting

26 Source: ME Statutes

27

28 **Multi-seat Contest:** Contest in which multiple candidates can run, up to a specified
29 number of seats. Voters may vote for no more than the specified number of
30 candidates. Also known as field race.

31 Association: voting

32 Source: NIST HF Rpt.

33

34 N

35

36 **NVLAP:** The NIST National Voluntary Laboratory Accreditation Program.

37 Association: testing

38 Source: no attribution

39

40 **Non-partisan Office:** Elected office for which candidates run independent of political
41 party affiliation.

42 Association: voting

43 Source: VS, IEEE 1583

44

Appendix A Glossary

1 **Nonvolatile Memory:** Memory in which information can be stored indefinitely with no
2 power applied. Static RAM, ROMs and EPROMs are examples of nonvolatile
3 memory.

4 Association: IT

5 Source: VSS, IEEE 1583

6

7 O

8

9 **On-Site Absentee Voting:** See Early Voting.

10

11 **Open Primary:** Primary election in which voters, regardless of political affiliation, may
12 choose in which party's primary they will vote. Some states require voters to
13 publicly declare their choice of party ballot at the polling place, after which the
14 poll worker provides or activates the appropriate ballot. Other states allow the
15 voters to make their choice of party ballot within the privacy of the voting booth.
16 Voters also may be permitted to vote on nonpartisan offices and ballot issues that
17 are presented at the same election.

18 Association: voting

19 Source: VSS, IEEE 1583

20

21 **Operational Environment:** See Voting Equipment Operational Environment.

22 Association: voting, IT

23 Source: IEEE 1583

24

25 **Operations Procedures:** See Voting Equipment Operations Procedures.

26 Association: voting, IT

27 Source: IEEE 1583

28

29 **Optical Scan, Optical Scan System:** See Marksense.

30 Association: voting

31 Source: IEEE 1583

32

33 **Overvotes:** (1) Generally prohibited practice of voting for more than the allotted number
34 of candidates for the office being contested. (2) The voting for more than the
35 allotted number of selections in a race. (3) Occurs when the number of
36 alternatives selected by a voter in a contest exceeds the maximum number
37 allowed for that contest. Also known as overvoting.

38 Association: voting

39 Source: (1) VSS, (2) IEEE 1583, (3) NIST HF Rpt.

40

41 P

42

Appendix A Glossary

- 1 **Paper-based Voting System:** Voting system that records votes, counts votes, and
2 produces a tabulation of the vote count, using one or more ballot cards or a
3 written list of choices.
4 Association: voting
5 Source: VSS, IEEE 1583
6
- 7 **Paper Record:** Paper ballot image or summary that is a copy of the electronic record and
8 that is verifiable by a voter. See also ballot image.
9 Association: voting, security
10 Source: no attribution
11
- 12 **Partisan Office:** Elected office for which (partisan and non-partisan) candidates run as
13 representatives of a political party.
14 Association: voting
15 Source: VSS, IEEE 1583
16
- 17 **Pass/Fail Criteria:** Decision factor or expected result used to determine if software or
18 hardware passes a test case.
19 Association: testing
20 Source: IEEE 1583
21
- 22 **Physical Configuration Audit (PCA):** (1) Inspection that compares the voting system
23 components submitted for qualification to the vendor's technical documentation
24 and confirms that the documentation submitted meets the requirements of the
25 VVSG. As part of the PCA, the building of the executable system to ensure that
26 the qualified executable release is built from the tested components is also
27 witnessed. (2) Review, by the test authority, of the vendor's technical
28 documentation, source code, and observation of the code compile.
29 Association: testing, voting
30 Source: (1) VSS, (2) IEEE 1583
31
- 32 **Precinct Count:** Counting of ballots on automatic tabulating equipment provided by the
33 election authority in the same precinct polling place in which those ballots have
34 been cast.
35 Association: voting
36 Source: IL Statutes
37
- 38 **Point Size:** Method of measuring type, where the size of a font is measured from the top
39 of the tallest character to the bottom of the lowest character.
40 Association: human factors, typography
41 Source: no attribution
42
- 43 **Political Subdivision:** Any unit of government, such as counties and cities but often
44 excepting school districts, having authority to hold elections for public offices or
45 on ballot issues.

Appendix A Glossary

- 1 Association: voting
2 Source: VSS
3
- 4 **Polling Location:** Physical address of a polling place.
5 Association: voting
6 Source: VSS, IEEE 1583
7
- 8 **Polling Place:** Facility that is staffed by poll workers and equipped with voting
9 equipment, to which voters from a given precinct come to cast in-person ballots.
10 See also voting station.
11 Association: voting
12 Source: VSS, IEEE 1583
13
- 14 **Precinct:** Administrative division representing a geographic area in which voters cast
15 ballots at the same polling place. Voters casting absentee ballots may also be
16 combined into one or more administrative absentee precincts for purposes of
17 tabulating and reporting votes. Generally, voters in a polling place precinct are
18 eligible to vote in a general election using the same ballot format. In some
19 jurisdictions, however, the ballot formats may be different due to split precincts or
20 required ballot rotations within the precinct.
21 Association: voting
22 Source: VSS, IEEE 1583
23
- 24 **Precision:** (1) Extent to which a given set of measurements of the same sample agree
25 with their mean. Thus, precision is commonly taken to be the standard deviation
26 estimated from sets of duplicate measurements made under conditions of
27 repeatability, that is, independent test results obtained with the same method on
28 identical test material, in the same laboratory or test facility, by the same operator
29 using the same equipment in short intervals of time. (2) Degree of refinement in
30 measurement or specification, especially as represented by the number of digits
31 given.
32 Association: testing, statistics
33 Source: IEEE 1583
34
- 35 **Pre-Standard:** Document that is adopted provisionally by a standardizing body and
36 made available to the public in order that the necessary experience may be gained
37 from its application on which to base a standard.
38 Association: standardization
39 Source: ISO Guide 2-4
40
- 41 **Primary Election:** Election held to determine which candidate will represent a political
42 party in the general election. Some states have an open primary, while others
43 have a closed primary. Sometimes elections for nonpartisan offices and ballot
44 issues are held during primary elections.
45 Association: voting

Appendix A Glossary

1 Source: VSS

2

3 **Primary Presidential Delegation Nominations:** Primary election in which voters
4 choose the delegates to the Presidential nominating conventions allotted to their states by
5 the national party committees.

6 Association: voting

7 Source: VSS

8

9 **Privacy:** Voting system is said to provide privacy when it makes it impossible for others
10 to find out how the voter voted.

11 Association: security, voting

12 Source: no attribution

13

14 **Private Key:** The secret part of an asymmetric key pair that is typically used to digitally
15 sign or decrypt data.

16 Association: security

17 Source: NIST SP 800-63

18

19 **Profile:** (1) Subset of a standard for a particular constituency that identifies the features,
20 options, parameters, and implementation requirements necessary for meeting a
21 particular set of requirements. (2) Specialization of a standard for a particular
22 context, with constraints and extensions that are specific to that context.

23 Association: standardization

24 Source: (1) ISO 8632, (2) no attribution

25

26 **Provisional Ballot:** Ballot provided to individuals who claim they are eligible to vote but
27 whose eligibility cannot be confirmed when they present themselves to vote.

28 Once voted, such ballots are not included in the tabulation until after the voter's
29 eligibility is confirmed. See also challenged ballot.

30 Association: voting

31 Source: VSS, IEEE 1583, NASS

32

33 **Public Information Package (PIP):** Data to be published openly and made available to
34 all without let or hindrance, irrespective of need-to-know.

35 Association: testing

36 Source: no attribution

37

38 **Public Key:** Public part of an asymmetric key pair that is typically used to verify
39 signatures or encrypt data.

40 Association: security

41 Source: NIST SP 800-63

42

43 **Public Key Certificate:** Digital document issued and digitally signed by the private key
44 of a Certification Authority that binds the name of a subscriber to a public key.

Appendix A Glossary

1 The certificate indicates that the subscriber identified in the certificate has sole
2 control and access to the private key.

3 Association: security

4 Source: NIST SP 800-63

5

6 **Public Network Direct Record Electronic (DRE) Voting System:** Form of DRE voting
7 system that uses electronic ballots and transmits vote data from the polling place
8 to another location (such as a central count facility) over a public network beyond
9 the control of the election authority.

10 Association: voting

11 Source: VSS

12

13 **Punchcard Voting System:** Voting system where votes are recorded by means of
14 punches made in voting response fields designated on one or both faces of a ballot
15 card or series of cards.

16 Association: voting

17 Source: VSS, IEEE 1583

18

19 Q

20

21 **Qualification Number:** Deprecated. A number issued by NASED (National Association
22 of State Election Directors) to a system that has been tested by certified
23 Independent Test Authorities for compliance with the qualification test standards.
24 Issuance of a Qualification Number indicates that the system qualifies for
25 certification process of states that have adopted the Standards. Note: Qualification
26 Numbers for Voting Systems that were qualified for compliance to the 1990
27 Voting System Standards are still valid. Voting Systems that were qualified for
28 compliance to the Voting System Standards 2002 will need to be assigned an
29 EAC Certification number.

30 Association: testing, voting

31 Source: VSS

32

33 **Qualification Test Report:** Deprecated, replaced by Test Report for EAC Certification.

34 Association: testing, voting

35 Source: VSS, NIST HB150

36

37 **Qualification Testing:** Examination and testing of a computerized voting system by
38 using qualification test standards to determine if the system complies with the
39 qualification performance and test standards and with its own specifications. This
40 process occurs prior to state certification.

41 Association: testing, voting

42 Source: VSS

43

Appendix A Glossary

1 **Quality Assurance Plan:** Document that identifies the system and actions required to
2 provide adequate assurance that an item or product conforms to the documented
3 technical requirements.

4 Association: testing

5 Source: IEEE 1583

6

7 **Quality Control:** Operational techniques and activities that are used to fulfill
8 requirements for quality.

9 Association: testing

10 Source: NIST HB 150

11

12 **Quality Manual:** Document stating the quality policy and describing the quality system
13 of an organization.

14 Association: testing, software engineering

15 Source: NIST HB 150

16

17 R

18

19 **Race:** Contest between candidates.

20 Association: voting

21 Source: no attribution

22

23 **Ranked Order Voting:** Practice that allows voters to rank candidates in a contest in
24 order of choice: 1, 2, 3 and so on. It takes a majority to win. If anyone receives a
25 majority of the first choice votes, that candidate wins that election. If not, the last
26 place candidate is deleted, and all ballots are counted again, but this time each
27 ballot cast for the deleted candidate counts for the next choice candidate listed on
28 the ballot. The process of eliminating the last place candidate and recounting the
29 ballots continues until one candidate receives a majority of the vote. The practice
30 is also known as instant runoff voting, preferences or preferential voting, or
31 choice voting.

32 Association: voting

33 Source: VSS, IEEE 1583

34

35 **Read Ballot:** Ballot that has been processed but may or may not be counted.

36 Association: voting

37 Source: no attribution

38

39 **Recall Issue with Options:** Process that allows voters to remove their elected
40 representatives from office prior to the expiration of their terms of office. Often,
41 the recall involves not only the question of whether a particular officer should be
42 removed from office, but also the question of naming a successor in the event that
43 there is an affirmative vote for the recall.

44 Association: voting

Appendix A Glossary

1 Source: VSS

2

3 **Recertification:** State examination, and possibly the retesting of a voting system that was
4 modified subsequent to receiving state certification. The object of this process is
5 to determine if the modification still permits the system to function properly in
6 accordance with state requirements.

7 Association: voting

8 Source: VSS, IEEE

9

10 **Record:** (n) Data that are preserved by a voting system, not necessarily in any particular
11 form. (v) To preserve such data.

12 Association: voting

13 Source: no attribution

14

15 **Records:** Recordings of evidence of activities performed or results achieved (e.g., forms,
16 reports, test results), which serve as a basis for verifying that the organization and
17 the information system are performing as intended. Also used to refer to units of
18 related data fields (i.e., groups of data fields that can be accessed by a program
19 and that contain the complete set of information on particular items).

20 Association: security

21 Source: NIST SP 800-53

22

23 **Recount:** Process conducted for verifying the votes counted in an election.

24 Association: voting

25 Source: no attribution

26

27 **Referendum:** Contest between two (or more) choices in response to a question (e.g.,
28 bond issue, recall, retention of a judge in office, proposed amendment).

29 Association: voting

30 Source: NIST HF Rpt.

31

32 **Repeatability:** Ability to obtain independent test results by using the same testing
33 method on identical test items in the same testing laboratory by the same operator
34 using the same equipment within short intervals of time.

35 Association: testing, conformity assessment

36 Source: ISO 5725

37

38 **Report:** (n) Printed record, formatted for human readability, that is produced by a voting
39 system. (v) to produce such a record.

40 Association: voting

41 Source: no attribution

42

43 **Reproducibility:** Ability to obtain test results with the same test method on identical test
44 items in different testing laboratories with different operators using different
45 equipment.

Appendix A Glossary

1 Association: testing, conformity assessment

2 Source: ISO 5725

3

4 **Requirement:** Provision that conveys criteria to be fulfilled. See also compliance point

5 Association: testing, standardization

6 Source: NIST HB 150

7

8 **Residual Vote:** Total number of votes that cannot be counted for a specific contest.

9 There may be multiple reasons for residual votes (e.g., declining to vote for the
10 contest, overvoting in a contest, failure to cast ballot before leaving polling place).

11 Association: voting, human factors

12 Source: NIST HF Rpt.

13

14 **Risk Assessment:** Process of identifying the risks to system security and determining the
15 probability of occurrence, the resulting impact, and additional safeguards that
16 would mitigate this impact.

17 Association: security

18 Source: NIST SP 800-30

19

20 **Rolloff:** Difference between number of votes cast for contests in the higher offices on the
21 ballot and the number cast for contests that are lower on the ballot. It sometimes
22 referred to as voter fatigue.

23 Association: voting, human factors

24 Source: NIST HF Rpt.

25

26 **Runoff Election:** Election to select a winner following a primary, or sometimes a general
27 election, in which no candidate in the contest received the required minimum
28 percentage of the votes cast. The two candidates receiving the most votes for the
29 race in question proceed to the runoff election.

30 Association: voting

31 Source: VSS, IEEE 1583

32

33 S

34

35 **Second Chance Voting:** Provides that voters are notified when their ballots contain
36 errors and are given a chance to correct them. Required by HAVA 2002.

37 Association: voting

38 Source: NASS

39

40 **Secret Key:** Cryptographic key that is used with a symmetric cryptographic algorithm
41 that is uniquely associated with one or more entities and is not be made public.
42 The use of the term “secret” in this context does not imply a classification level,
43 but rather implies the need to protect the key from disclosure.

44 Association: security

Appendix A Glossary

1 Source: NIST SP 800-57

2

3 **Section 508:** Amendment by Congress in 1998, to the Rehabilitation Act to require
4 federal agencies to make their electronic and information technology accessible to
5 people with disabilities. Section 508 was enacted to eliminate barriers in
6 information technology.

7 Association: HF: accessibility

8 Source: no attribution

9

10 **Security Controls:** Management, operational, and technical controls (i.e., safeguards or
11 countermeasures) prescribed for an information system to protect the
12 confidentiality, integrity, and availability of the system and its information.

13 Association: security

14 Source: FIPS 199, NIST SP 800-53

15

16 **Semi-static Voting System Software:** Software that contains configuration information
17 for the voting system based on the voting equipment that is installed and the
18 election being conducted. Semi-static software is only modified during the
19 installation of the voting system software on voting equipment or the election
20 specific software such as ballot formats. See also voting system software.

21 Association: voting

22 Source: no attribution

23

24 **Specification, Technical:** Document that prescribes technical requirements to be fulfilled
25 by a product, process or service.

26 Association: standardization

27 Source: ISO Guide 2-4

28

29 **Split Precinct:** Precinct containing more than one ballot format in order to accommodate
30 a contiguous geographic area served by the precinct that contains more than one
31 election district.

32 Association: voting

33 Source: VSS, IEEE 1583

34

35 **Spoiled Ballot:** Ballot that has been voted but will not be cast.

36 Association: voting

37 Source: no attribution

38

39 **Standard:** Document established by consensus and approved by a recognized body that
40 provides, for common and repeated use, rules, guidelines or characteristics for
41 activities or their results, aimed at the achievement of the optimum degree of
42 order in a given context.

43 Association: standardization

44 Source: ISO Guide 2-4

45

Appendix A Glossary

- 1 **Standard, Product:** Standard that specifies requirements to be fulfilled by a product or a
2 group of products, to establish its fitness for purpose. A product standard may
3 include, in addition to the fitness for purpose requirements, directly or by
4 reference, aspects such as terminology, sampling, testing, packaging, and labeling
5 and sometimes processing requirements.
6 Association: standardization
7 Source: ISO Guide 2-6
8
- 9 **Standard, Testing:** Standard that is concerned with test methods, sometimes
10 supplemented with other provision related to testing, such as sampling, use of
11 statistical methods, or sequence of test.
12 Association: standardization
13 Source: ISO Guide 2-6
14
- 15 **Standard on Data to Be Provided:** Standard that contains a list of characteristics for
16 which values or other data are to be stated for specifying the product, process, or
17 service.
18 Association: standardization
19 Source: ISO Guide 2-4
20
- 21 **State Certification:** State examination and possibly testing of a voting system to
22 determine its compliance with state laws, regulations, and rules and any other
23 state requirements for vote systems.
24 Association: testing, conformity assessment, voting
25 Source: VSS
26
- 27 **Static Voting System Software:** Software that does not change based on the election
28 being conducted or the voting equipment upon which it is installed, e.g.,
29 executable code. See also voting system software.
30 Association: voting
31 Source: no attribute
32
- 33 **Straight Party Voting:** Mechanism by which voters are permitted to cast a vote
34 indicating the selection of all candidates on the ballot for a single political party.
35 Association: voting
36 Source: VSS, IEEE 1583
37
38
- 39 **Support Software:** Software that aids in the development or maintenance of other
40 software, for example, compilers, loaders and other utilities.
41 Association: IT
42 Source: VSS, IEEE 1583
43
- 44 **Symmetric (Secret) Encryption Algorithm:** Encryption algorithms using the same
45 secret key for encryption and decryption.

Appendix A Glossary

1 Association: security
2 Source: NIST SP 800-49

3

4 T

5

6 **Tabulation:** See Count.
7 Association: voting
8 Source: VSS, IEEE 1583

9

10 **T-Coil:** Inductive coil used in some hearing aids to allow reception of an audio band
11 magnetic field signal, instead of an acoustic signal. The magnetic or inductive
12 mode of reception is commonly used in conjunction with telephones, auditorium
13 loop systems and other systems that provide the required magnetic field output.

14 **Association:** Human Factors, HF: accessibility
15 **Source:** ANSI C63.19

16

17 **Tabulator:** Device that counts votes.
18 Association: voting
19 Source: no attribution

20

21 **Technical Data Package:** Vendor documentation relating to the voting system that shall
22 be submitted with the system as a precondition of qualification testing.
23 Association: testing, voting
24 Source: VSS

25

26 **Telecommunications:** Transmission, between or among points specified by the user, of
27 information of the user's choosing, without change in the form or content of the
28 information as sent and received.
29 Association: IT
30 Source: IEEE 1583

31

32 **Test:** Technical operation that consists of the determination of one or more
33 characteristics of a given product, process or service according to a specified
34 procedure.
35 Association: testing
36 Source: ISO Guide 2-4, NIST HB 150

37

38 **Test Campaign:** Sum of the work by a VSTL on a single product or system from
39 contract through test plan, conduct of testing for each requirement (including
40 hardware, software, and systems), reporting, archiving, and responding to issues
41 afterwards.
42 Association: testing, voting
43 Source: NIST HB 150-22

44

Appendix A Glossary

- 1 **Test Case Specification:** Document identifying the specific inputs and expected result
2 for each test identified in the test plan.
3 Association: testing
4 Source: IEEE 1583
5
- 6 **Test Design Specification:** Expanded detail of the test approach identified in the test
7 plan for the related tests.
8 Association: testing
9 Source: IEEE 1583
10
- 11 **Test Method:** Specified technical procedure for performing a test.
12 Association: testing, conformity assessment
13 Source: ISO Guide 2
14
- 15 **Test Plan:** Document created prior to testing that outlines the scope and nature of testing,
16 items to be tested, test approach, resources needed to perform testing, test tasks,
17 risks and schedule.
18 Association: testing, conformity assessment
19 Source: IEEE 1583
20
- 21 **Testing:** Determination of one or more characteristics of an object of conformity
22 assessment, according to a procedure. Testing typically applies to materials,
23 products, or processes.
24 Association: testing, conformity assessment
25 Source: ISO 17000
26
- 27 **Testing Authority:** Organization that performs qualification testing and produces
28 qualification test reports. See also Voting System Testing Laboratory.
29 Association: testing, conformity assessment
30 Source: no attribution
31
- 32 **Test Report for EAC Certification:** Report of results of independent testing of a voting
33 system indicating the data testing was completed, the specific system version
34 tested, and the scope of tests conducted.
35 Association: testing, voting
36 Source: VSS, NIST HB 150
37
- 38 **Touch Screen Voting Machine:** Machine that utilizes a computer screen whereby a
39 voter executes that voter's choices by touching designated locations on the screen
40 and that then tabulates those choices.
41 Association: voting
42 Source: ME Statutes
43
- 44 **Traceability:** Ability to relate a property of the result of a measurement or the value of a
45 standard to stated references.

Appendix A Glossary

1 Association: testing

2 Source: VIM

3

4 **Type font:** Type of a given size and style, e.g., 10-point Bodoni Modern.

5 Association: human factors

6 Source: ANSI Dict.

7

8 U

9

10 **Uncertainty:** Parameter, associated with the result of a measurement that characterizes
11 the dispersion of the values that could reasonably be attributed to that which is
12 being measured.

13 Association: testing

14 Source: VIM, NIST HB 150

15

16 **Undervote:** (1) Occurs when the number of alternatives selected by a voter in a contest is
17 less than the maximum number allowed for that contest. (2) Practice of voting for
18 less than the total number of election contests listed on the ballot, or of voting for
19 less than the number of positions to be filled for a single office (i.e., A person
20 would undervote if a contest required the selection of three out of a given number
21 of candidates, and the voter chose only two candidates). Also known as
22 undervoting.

23 Association: voting

24 Source: (1) NIST HF Rpt. (2) VSS, IEEE 1583, NASS

25

26 **Usability:** Effectiveness, efficiency and satisfaction with which a specified set of users
27 can achieve a specified set of tasks in a particular environment. Usability in the
28 context of voting system standards refers to voters being able to cast valid votes
29 as they intended quickly, without errors and with confidence that their ballot
30 choices as marked were recorded correctly. It also refers to the usability of the
31 setup of voting equipment for the election and the running of the election by poll
32 workers and election administrators.

33 Association: Human factors, HF: usability

34 Source: ISO 9241, NIST HF Rpt

35

36 **Usability Testing:** Encompasses a range of methods that examine how users in the target
37 audience actually interact with a system, in contrast to analytic techniques such as
38 usability inspection.

39 Association: human factors, HF: usability

40 Source: Usability First Usability Glossary

41

42 **User Documentation:** See Voting Equipment User Documentation.

43 Association: vote, test

44 Source: IEEE 1583

Appendix A Glossary

1

2 **V**

3

4 **Valid Vote:** Vote from a ballot or ballot image that conforms to jurisdiction dependent
5 criteria for accepting or rejecting entire ballots, such as stray marks policies and
6 voter eligibility criteria, in a contest that was not overvoted.

7 Association: voting

8 Source: no attribution

9

10 **Validation:** Process of evaluating a system or component during or at the end of the
11 development process to determine whether it satisfies specified requirements.

12 Association: testing

13 Source: VSS

14

15 **Verification:** Process of evaluating a system or component to determine whether the
16 products of a given development phase satisfy the conditions (such as
17 specifications) imposed at the start of the phase.

18 Association: testing

19 Source: VSS

20

21 **Verification and Validation (V&V):** Process of determining whether requirements for a
22 system or component are complete and correct, the products of each development
23 phase fulfill the requirements or conditions imposed by the previous phase, and
24 the final system or component complies with specified requirements.

25 Association: testing

26 Source: IEEE 1583

27

28 **Video Ballot:** Electronic voter interface which presents ballot information and voting
29 instructions as video images. See also ballot.

30 Association: voting, human factors, HF: accessibility

31 Source: FL Statutes

32

33 **Vote Capture Station:** Component of a voting system that captures and stores records of
34 voter choices. See also witness device.

35 Association: voting

36 Source: no attribution

37

38 **Vote for N of M:** Ballot choice in which voters are allowed to vote for a limited number
39 of candidates for a single office from a larger field of candidates.

40 Association: voting

41 Source: VSS, IEEE 1583

42

43 **Voted Ballot:** Ballot that a voter has finished filling in, but has not yet cast or spoiled.

44 Association: voting

Appendix A Glossary

1 Source: no attribution

2

3 **Voter Registration System:** Set of processing functions and data storage that maintains
4 records of eligible voters. This system generally is not considered a part of a
5 Voting System subject to the 2002 Voting System Standards.

6 Association: voting

7 Source: VSS

8

9 **Voter Verified Audit Record:** (1) Human-readable printed record of all of a voter's
10 selections presented to the voter before the vote is cast. (2) Printed version of the
11 ballot that voters may view and check for accuracy before their votes are cast. See
12 also Voter Verified Record or Voter Verified Paper Trail.

13 Association: voting

14 Source: (1) IEEE 1583, (2) NASS

15

16 **Voter-Verified Paper Trail (VVPT):** See Voter Verified Audit Record.

17

18 **Voting Environment:** Aspects of the voting milieu outside of the voting system that are
19 encountered by voters, e.g., ramps, lighting, noise, temperature, electro-magnetic
20 interference. See also voting equipment operational environment.

21 Association: human factors, voting

22 Source: no attribution

23

24 **Voting Equipment:** Any mechanical, electromechanical, or electronic components of a
25 voting system. See also Electronic Voting Machine.

26 Association: voting

27 Source: no attribution

28

29 **Voting Equipment Operational Environment:** All software, hardware (including
30 facilities, furnishings and fixtures), materials, documentation, and the interface
31 used by the election personnel, maintenance operator, poll worker, and voter,
32 required for voting equipment operations. See also voting environment.

33 Association: voting

34 Source: IEEE 1583

35

36 **Voting Equipment Operations Procedures:** Ordered steps that election personnel, poll
37 workers or voters follows to perform the tasks for each operational environment.

38 Association: voting

39 Source: IEEE 1583

40

41 **Voting Equipment User Documentation:** Electronic or printed material that provides
42 information for the election officials or voters.

43 Association: voting

44 Source: IEEE 1583

45

Appendix A Glossary

- 1 **Voting Machine:** Mechanical or electronic equipment for the direct recording and
2 tabulation of votes. See also voting system.
3 Association: voting
4 Source: OH Statutes
5
- 6 **Voting Officials:** Term used to designate the group of people associated with elections,
7 including election personnel, poll workers, ballot designers and those responsible
8 for the installation, operation and maintenance of the voting systems.
9 Association: voting
10 Source: no attribution
11
- 12 **Voting Position:** Specific response fields on a ballot where the voter indicates the
13 selection of a candidate or ballot proposition.
14 Association: voting
15 Source: VSS, IEEE 1583
16
- 17 **Voting Process:** Entire array of procedures, people, resources, equipment and locales by
18 which elections are conducted.
19 Association: voting
20 Source: no attribution
21
- 22 **Voting Station:** Location within the polling place where voters may record their votes.
23 A voting station includes the voting booth or enclosure and the vote-recording
24 device.
25 Association: voting
26 Source: VSS, IEEE 1583
27
- 28 **Voting System:** Combination of mechanical, electromechanical, or electronic equipment
29 and any corresponding documentation. It includes the software required to
30 program, control, and support the equipment that is used to define ballots; to cast
31 and count votes; to report and/or display election results; and to maintain and
32 produce all audit trail information. A voting system may also include the
33 transmission of results over telecommunication networks. It additionally includes
34 the associated documentation used to operate the system, maintain the system,
35 identify system components and their versions, test the system during its
36 development and maintenance, maintain records of system errors and defects, and
37 determine specific changes made after system qualification. See also electronic
38 voting machine, voting equipment, voting machine.
39 Association: voting
40 Source: VSS
41
- 42 **Voting System Software:** All the executable code and associated configuration files
43 needed for the proper operation of the voting system regardless of the location of
44 installation and functionality provided. This includes third party software such as

Appendix A Glossary

1 operating systems, drivers, etc. See also dynamic voting system software, semi-
2 static voting system software, and static voting system software.

3 Association: voting

4 Source: no attribution

5

6 **Voting System Testing:** Examination and testing of a computerized voting system by
7 using test methods to determine if the system complies with the requirements in
8 the Voluntary Voting System Guidelines and with its own specifications. This
9 process occurs prior to EAC certification and subsequent State certification. .

10 Association: testing, voting

11 Source: VSS

12

13 **Voting System Testing Laboratory (VSTL):** Testing laboratory accredited by the
14 National Voluntary Laboratory Accreditation Program for testing of voting
15 systems. The Director of NIST submits a list of independent, non-Federal VSTLs
16 to the EAC for accreditation.

17 Association: testing

18 Source: NIST HB 150-22

19

20 **VVPAT-Ballot Box:** Ballot box containing the paper record.

21 Association: security, voting

22 Source: no attribution

23

24 **VVPAT-Display:** Transparent covering over the paper record printed by the DRE-
25 VVPAT. It permits a voter to inspect the paper record but prevents the voter from
26 physically handling the paper record.

27 Association: security, voting

28 Source: no attribution

29

30 **VVPAT-Printer:** Printing capability of the voting system, including the printer and any
31 associated device involved in printing the paper records and transferring them to
32 ballot boxes.

33 Association: security, voting

34 Source: no attribution

35

36 W

37

38 **Witness Device:** Component of a voting system that captures voter verification of the
39 records at the voting station. See also vote capture station.

40 Association: voting

41 Source: no attribution

42

43 **Write-in Voting:** Means to cast a vote for an individual not listed on the ballot. Voters
44 may do this by using a marking device to physically write their choice on the

Appendix A Glossary

- 1 ballot or they may use a keypad, touch screen or other electronic means to
2 indicate their choice.
- 3 Association: voting
4 Source: VSS, IEEE 1583
5
- 6 **Workspace:** See voting station.
7 Association: voting
8 Source: VSS

Appendix A Glossary

A.2 Sources

Definitions in this Glossary are either extracted from or based on the following sources:

- 44 U.S.C. United States Code, Title 44, Chapter 35, Information Security, Section 3542, Definitions.
- ACM SIGCHI ACM's Special Interest Group on Computer-Human Interaction, <http://www.acm.org/sigchi/> (February 2005).
- ADA Americans with Disabilities Act of 1990.
- ANSI Dict. American National Dictionary for Information Processing Systems, American National Standards Committee X3, Information Processing Systems, 1982.
- ANSI 354 American National Standards Institute, InterNational Committee for Information Technology Standards, Common Industry Format for Usability Test Reports, ANSI/INCITS 354-2001
- ANSI C63.19 American National Standards for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids, 2001.
- electionline <http://electionline.org/>, (March 2005).
- FIPS 140-2 Federal Information Processing Standard 140-2, Security Requirements for Cryptographic Modules, May 2001.
- FIPS 199 Federal Information Processing Standard 199, Standards for Security Categorization of Federal Information and Information Systems, December 2003.
- FIPS 201 Federal Information Processing Standard 201, Personal Identity Verification for Federal Employees and Contractors, February 2005.
- FL Statutes Florida Statutes: Section 97.021(3) and Section 101.56062(1)(n) Standards for accessible voting.
- HAVA Help America Vote Act of 2002 - Public Law 107-252.
- IEA International Ergonomics Association, <http://www.iea.cc/>, (February 2005).

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1	IEEE 1583	IEEE P1583/D5.3.2 Draft Standard for the Evaluation of Voting
2		Equipment, December 6, 2004.
3		
4	IL Statutes	Illinois Public Act 093-0574.
5		
6	ISO 5725	ISO/IEC 5725:1994 Accuracy (trueness and precision) of
7		measurement methods and results.
8		
9	ISO 9241	ISO/IEC 9241:1997 Ergonomic requirements for office work with
10		visual display terminals (VDT).
11		
12	ISO 17000	ISO/IEC 17000:2004 Conformity assessment -- Vocabulary and
13		general principles.
14		
15	ISO Guide 2-4	ISO/IEC Guide 2:2004 Standardization and related activities - General
16		vocabulary.
17		
18	ISO Guide 2-6	ISO/IEC Guide 2:1996 Standardization and related activities - General
19		vocabulary.
20		
21	ME Statutes	Maine LD 1759 Enacted 4/22/2004.
22		
23	NASS	National Association of Secretaries of State Election Reform Key
24		Terms,
25		http://www.nass.org/Election%20Reform%20Key%20Terms.pdf
26		(February 2005).
27		
28	NIST HB 143	NIST Handbook 143 State Weights and Measures Laboratories
29		Program Handbook.
30		
31	NIST HB 150	NIST Handbook 150:2001 NVLAP Procedures and General
32		Requirements.
33		
34	NIST HF Rpt.	NIST Special Publication 500-256 Improving the Usability and
35		Accessibility of Voting Systems and Products, May 2004.
36		
37	NIST SP 800-30	NIST Special Publication 800-30 Risk Management Guide for
38		Information Technology Systems, July 2002.
39		
40	NIST SP 800-49	NIST Special Publication 800-49 Federal S/MIME V3 Client Profile,
41		November 2002.
42		
43	NIST SP 800-53	NIST Special Publication 800-53 Recommended Security Controls for
44		Federal Information Systems, Appendix B, Glossary.
45		

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1	NIST SP 800-59	NIST Special Publication 800-59 Guideline for Identifying an
2		Information System as a National Security System, August 2003.
3		
4	NIST SP 800-63	NIST Special Publication 800-63 Electronic Authentication Guideline:
5		Recommendations of the National Institute of Standards and
6		Technology, June 2004.
7		
8	OH Statutes	Ohio HB-262 enacted 5/7/2004.
9		
10	OMB A130	OMB Circular A-130, Appendix III.
11		
12	Section 508	Electronic and Information Technology Accessibility Standards (2002)
13		Architectural and Transportation Barriers Compliance Board, 36 CRF
14		Part 1194, http://www.accessboard.gov/sec508/508standards.htm .
15		
16	Usability	Usability First Usability Glossary,
17	Glossary	http://www.usabilityfirst.com/glossary/main.cgi , (February 2005).
18		
19	VIM	The ISO International Vocabulary of Basic and General Terms in
20		Metrology (VIM), 1994.
21		
22	VSS	Voting Systems Standards of 2002 (Federal Election Commission),
23		Volumes I and II.
24		
25	Whatis.com	Whatis.com, IT Encyclopedia,
26		http://whatis.techtarget.com/definition/0,,sid9_gci491925,00.html
27		(February 2005).
28		
29	WordNet	WordNet ®2.0, © 2003 Princeton University.

Appendix A Glossary

1 **A.3 List of Associations**

2

3 Conformity Assessment

4 Human Factors (HF)

5 HF: accessibility

6 HF: usability

7 IT - Information Technology

8 Security

9 Software Engineering

10 Standardization

11 Testing

12 Typography

13 Voting

14

15

16 **A.4 List of Deprecated Terms**

17

18 The following terms are being phased out and replaced by newer terms. Note that there
19 is a transition period where both terms are in use at the same time.

20

21 **Deprecated Term****Replaced by**

22 Certification Testing

State Certification

23 Electronic Cast Vote Record

Cast Vote Record

24 Qualification Number

no replacement at this time

25 Qualification Test Report

Test Report for EAC Certification

26 Qualification Testing

Voting System Testing

27

28

29

30

31

32

33