

Volume I, Appendix A

Glossary

Table of Contents

A Glossary for Voting Systems	1
A.1 Glossary	1
A.2 Sources	38
A.3 List of Associations	41
A.4 List of Deprecated Terms	41

Appendix A Glossary

1

2

Glossary for Voting Systems

3

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

7

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

10

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

14

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

18

19 Some of the terms in the VSS-2002 have been changed due to modifications in voting
20 systems, voting process and/or mandates in HAVA. A list of these changed terms is in
21 section A.4 List of Changed Terms.

22

A.1 Glossary

A

24

25

26 **Abandoned Ballot:** Ballot that the voter did not place in the ballot box or record as cast
27 on DRE before leaving the polling place. See also fled voter.

28

Association: voting

29

Source: no attribution

30

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

33

Association: voting

34

Source: no attribution

35

36 **Acceptance Testing:** Examination of a voting system and its components by the
37 purchasing election authority (usually in a simulated-use environment) to validate
38 performance of delivered units in accordance with procurement requirements, and
39 to validate that the delivered system is, in fact, the certified or qualified system
40 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. HAVA also includes accessibility requirements for
13 alternative language access for American Indian, Alaskan Native, Asian
14 American and Hispanic 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. (2) Procedure by which formal recognition is given that an
25 entity is competent to carry out specific tasks.

26 Association: testing, standardization

27 Source: (1) NIST HB 150, (2) ISO Guide 2-6

28

29 **Accreditation Body:** (1) Authoritative body that performs accreditation. (2) An
30 independent organization responsible for assessing the performance of other
31 organizations against a recognized standard, and for formally confirming the
32 status of those that meet the standard.

33 Association: testing, conformity assessment

34 Source: (1) ISO 17000, (2) IEEE 1583

35

36 **Accuracy:** (1) Extent to which a given measurement agrees with an accepted standard for
37 that measurement. (2) Closeness of the agreement between the result of a
38 measurement and a true value of the particular quantity subject to measurement.

39 NOTE 1: Accuracy is a qualitative concept. NOTE 2: The term precision should
40 not be used for accuracy.

41 Association: testing

42 Source: (1) IEEE 1583, (2) VIM

43

44 **Accuracy for Voting Systems:** Ability of the system to capture, record, store,
45 consolidate and report the specific selections and absence of selections, made by

Appendix A Glossary

- 1 the voter for each ballot position without error. Required accuracy is defined in
2 terms of an error rate that for testing purposes represents the maximum number of
3 errors allowed while processing a specified volume of data.
- 4 Association: voting, testing
5 Source: VSS
6
- 7 **Adequate Security:** Security commensurate with the risk and the magnitude of harm
8 resulting from the loss, misuse, or unauthorized access to, or modification of,
9 information. See also risk assessment.
- 10 Association: security
11 Source: OMB A130
12
- 13 **Alternative Formats:** In the context of voting systems, the ballot or accompanying
14 information is said to be in an alternative format if it is in a representation other
15 than the written English normally displayed to non-disabled English-literate
16 voters. NOTE: The usual purpose of these formats is to provide accessibility to
17 voters with disabilities or those with limited English proficiency. Examples
18 include, but are not limited to, Braille, ASCII text, large print, recorded audio, and
19 electronic formats that comply with Part 1194 of the standards for Section 508 of
20 the Rehabilitation Act Amendments.
- 21 Association: HF: accessibility
22 Source: IEEE 1583, Section 508
23
- 24 **Alternative Language Voting Station (ALVS):** voting station designed to be usable by
25 voters who have limited English proficiency, i.e., cannot read English.
- 26 Association: HF: accessibility, voting
27 Source: no attribution
28
- 29 **Approval:** Permission for a product or process to be marketed or used for stated purposes
30 or under stated conditions. NOTE: Approval can be based on fulfillment of
31 specified requirements or completion of specified procedures.
- 32 Association: testing, conformity assessment
33 Source: ISO 17000
34
- 35 **Attestation:** Issue of a statement, based on a decision following review, that fulfillment
36 of specified requirements has been demonstrated. NOTE: The resulting statement
37 is also known as a statement of conformity.
- 38 Association: testing, conformity assessment
39 Source: ISO 17000
40
- 41 **Audio Ballot:** Voter interface which provides the voter with audio stimuli and allows the
42 voter to communicate intent to the voting system through vocalization or physical
43 actions. See also ballot.
- 44 Association: voting, human factors, HF: accessibility
45 Source: FL Statutes

Appendix A Glossary

1

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

5 Association: HF: accessibility, voting

6 Source: no attribution

7

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

13 Association: testing, conformity assessment, security

14 Source: ISO 17000

15

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

19 Association: voting, security

20 Source: no attribution

21

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

25 Association: voting, security

26 Source: NASS

27

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

29 Association: security

30 Source: 44 U.S.C.

31

32 B

33

34 **Ballot:** The official presentation of all of the contests to be decided in a particular
35 election. See also, audio ballot, ballot image, video ballot, electronic voter
36 interface.

37 Association: Voting

38 Source: no attribution

39

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

43 Association: voting

44 Source: no attribution

Appendix A Glossary

- 1
2 **Ballot Counter:** Counter in a voting device that counts the votes cast in a single election
3 or election test.
4 Association: voting
5 Source: VSS
6
- 7 **Ballot Counting Logic:** Software logic that defines the combinations of voter choices
8 that are valid and invalid on a given ballot and that determines how the vote
9 choices are totaled in a given election. States differ from each other in the way
10 they define valid and invalid votes and in their vote-counting procedures.
11 Association: voting
12 Source: VSS
13
- 14 **Ballot Format:** One of any number of specific ballot configurations issued to the
15 appropriate precinct. At a minimum, ballot formats differ from one another in
16 content. They may also differ in size of type, graphical presentation, language
17 used, or method of presentation (e.g., visual or audio). Also referred to as ballot
18 style.
19 Association: voting
20 Source: VSS
21
- 22 **Ballot Image:** (1) Electronically produced record of all votes cast by a single voter. (2)
23 Record of all votes produced by a single voter. See also Cast Vote Record
24 Association: voting
25 Source: (1) VSS (2) no attribution
26
- 27 **Ballot Instructions:** Instructional text that appears on the ballot.
28 Association: voting
29 Source: no attribution
30
- 31 **Ballot Measure:** Laws and/or amendments to state constitutions that appear on the
32 ballot for approval or rejection.
33 Association: voting
34 Source: no attribution
35
- 36 **Ballot Preparation:** Selecting the specific contests and questions to be contained in a
37 ballot format and related instructions; preparing and testing election-specific
38 software containing these selections; producing all possible ballot formats; and
39 validating the correctness of ballot materials and software containing these
40 selections for an upcoming election.
41 Association: voting
42 Source: VSS
43
- 44 **Ballot Position:** Abstract choice that is represented by a single line item where a vote
45 may be recorded in a ballot or ballot image.

Appendix A Glossary

- 1 Association: voting
2 Source: no attribution
3
- 4 **Ballot Production:** Process of converting the ballot format to a medium ready for use in
5 the physical ballot production or electronic presentation.
6 Association: voting
7 Source: VSS
8
- 9 **Ballot Rotation:** Process of varying the order of the candidate names within a given
10 contest.
11 Association: voting
12 Source: VSS
13
- 14 **Ballot Set:** See ballot image.
15 Association: voting
16 Source: VSS
17
- 18 **Ballot Scanner:** Device used to read the data from a paper ballot or ballot card.
19 Association: voting
20 Source: VSS
21
- 22 **Ballot Style:** See ballot format.
23 Association: voting
24 Source: VSS
25
- 26 **Baseline:** Product configuration that has been formally submitted for national
27 certification, which thereafter serves as the basis for further development; some
28 degree of certification review and testing to be approved for use in federal
29 elections.
30 Association: voting, testing
31 Source: no attribution
32
- 33 **C**
34
- 35 **Calibration:** Set of operations that establish, under specified conditions, the relationship
36 between values indicated by a measuring instrument or measuring system, or
37 values represented by a material measure, and the corresponding known values of
38 a quantity intended to be measured.
39 Association: testing
40 Source: NIST HB 150
41
- 42 **Candidate:** Person contending in a race for office. A candidate may be explicitly
43 presented as one of the choices on the ballot or may be a write-in candidate.
44 Association: voting

Appendix A Glossary

1 Source: NIST HF Rpt

2

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

6 Association: voting

7 Source: VSS, IEEE 1583

8

9 **Canvass:** (1) Compilation of election returns and validation of the outcome that form the
10 basis of the official results by political subdivision. (2) Compilation of election
11 returns for validation and approval by the political subdivision of the outcome,
12 which form the basis for the official results.

13 Association: voting

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

15

16 **Cast Ballot:** Ballot that has been submitted by the voter to election officials for
17 tabulation.

18 Association: voting

19 Source: no attribution

20

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

24 Association: voting

25 Source: (1) IEEE 1583

26

27 **Catastrophic System Failure:** Total loss of function or functions, such as the loss or
28 unrecoverable corruption of voting data or the failure of an on-board battery of
29 volatile memory.

30 Association: voting

31 Source: VSS

32

33 **Central Counting:** Processing or counting of ballots in one or more locations other than
34 the polling place selected by the election authority.

35 Association: voting

36 Source: IL Statutes

37

38 **Certification:** (1) Procedure by which a third party gives written assurance that a
39 product, process or service conforms to specified requirements. (2) Third-party
40 attestation related to products, processes, systems or persons. See also State
41 Certification and National Certification.

42 Association: testing, conformity assessment

43 Source: (1) ISO Guide 2-6, (2) ISO 17000

44

Appendix A Glossary

- 1 **Certification Testing:** Testing performed under either national or state certification
2 processes to verify voting system conformance to requirements.
3 Association: testing, conformity assessment, voting
4 Source: no attribution
5
- 6 **Challenged Ballot:** Ballot provided to individuals whose eligibility to vote has been
7 questioned. Once voted, such ballots must be kept separate from other last ballots
8 and are not included in the tabulation until after the voter's eligibility is
9 confirmed. See also provisional ballot.
10 Association: voting
11 Source: VSS
12
- 13 **Checksum:** Computed value representing the sum of the contents of an instance of
14 digital data; used to check whether errors have occurred in transmission or
15 storage.
16 Association: security
17 Source: no attribution
18
- 19 **Claim of Conformance:** Statement by a vendor proclaiming that a specific product
20 conforms to a particular standard or set of standard profiles, a claim which is
21 verified or refuted by independent testing.
22 Association: testing, conformity assessment
23 Source: no attribution
24
- 25 **Closed Primary:** Primary election in which voters receive a ballot listing only those
26 candidates running for office in the political party with which the voters are
27 affiliated, along with nonpartisan offices and ballot issues presented at the same
28 election.
29 Association: voting
30 Source: VSS
31
- 32 **Commercial Off-the-Shelf (COTS):** Commercial, readily available hardware devices
33 (which may be electrical, electronic, mechanical, etc.; such as card readers,
34 printers, or personal computers) or software products (such as operating systems,
35 programming language compilers, database management systems, subsystems,
36 components; software, etc.).
37 Association: IT
38 Source: VSS, IEEE 1583
39
- 40 **Common Industry Format (CIF):** Refers to the format described in ANSI/INCITS 354-
41 2001 "Common Industry Format (CIF) for Usability Test Reports."
42 Association: HF: usability
43 Source: ANSI 354
44
- 45 **Compliance point:** Identified, testable requirement.

Appendix A Glossary

1 Association: testing, conformity assessment

2 Source: no attribution

3

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

11 Association: IT

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

13

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

17 Association: security.

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

19

20 **Configuration Identification:** Element of configuration management, consisting of
21 identifying the configuration items for a system and recording their functional and
22 physical characteristics in technical documentation.

23 Association: testing, software engineering

24 Source: IEEE 1583

25

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

29 Association: testing, software engineering

30 Source: IEEE 1583

31

32 **Configuration Management:** Discipline applying technical and administrative direction
33 and surveillance to identify and document functional and physical characteristics
34 of a configuration item, control changes to these characteristics, record and report
35 change processing and implementation status, and verify compliance with
36 specified requirements.

37 Association: testing, software engineering

38 Source: IEEE 1583

39

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

43 Association: testing, software engineering

44 Source: IEEE 1583

45

Appendix A Glossary

- 1 **Conformance:** see conformity
2 Association: testing, standardization
3 Source: no attribution
4
- 5 **Conformance Testing:** Process of testing an implementation against the requirements
6 specified in one or more standards. The outcomes of a conformance test are
7 generally a pass or fail result, possibly including reports of problems encountered
8 during the execution. Also known as conformity assessment.
9 Association: testing, standardization
10 Source: NIST HB 150
11
- 12 **Conformity:** Fulfillment by a product, process or service of specified requirements.
13 Association: testing, standardization
14 Source: ISO Guide 2-6
15
- 16 **Conformity Assessment:** Demonstration that specified requirements relating to a
17 product, process, system, person or body are fulfilled. See also testing, inspection,
18 certification, accreditation, conformity assessment bodies.
19 Association: testing, standardization
20 Source: ISO 17000
21
- 22 **Conformity Assessment Body:** Body that performs conformity assessment services.
23 NOTE: An accreditation body is not a conformity assessment body.
24 Association: testing, standardization
25 Source: ISO 17000
26
- 27 **Consensus:** General agreement, characterized by the absence of sustained opposition to
28 substantial issues by any important part of the concerned interests and by a
29 process that involves seeking to take into account the views of all parties
30 concerned and to reconcile any conflicting arguments.
31 Association: standardization
32 Source: ISO Guide 2-4
33
- 34 **Contest:** Each separate race for office or a referendum, proposition or questions a ballot.
35 A single ballot may contain one or more contests.
36 Association: voting
37 Source: no attribution
38
- 39 **Count:** Process of totaling votes.
40 Association: voting
41 Source: VSS, IEEE 1583
42
- 43 **Counted Ballot:** Ballot that has been tabulated and whose votes are included in the
44 candidate and measures vote totals.
45 Association: voting

Appendix A Glossary

1 Source: no attribution

2

3 **Corrective Action:** Action taken to eliminate the causes of an existing deficiency or
4 other undesirable situation in order to prevent recurrence.

5 Association: testing

6 Source: NIST HB 143

7

8 **Cross Filing:** see Cross-party Endorsement.

9 Association: voting

10 Source: VSS

11

12 **Cross-party Endorsement:** Endorsement of a single candidate or slate of candidates by
13 more than one political party. The candidate or slate appears on the ballot
14 representing each endorsing political party. Also referred to as *cross filing*.

15 Association: voting

16 Source: VSS, IEEE 1583

17

18 **Cryptographic Key:** Value used to control cryptographic operations, such as decryption,
19 encryption, signature generation or signature verification.

20 Association: security

21 Source: NIST SP 800-63

22

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

26 Association: security

27 Source: NIST SP 800-59

28

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

32 Association: voting

33 Source: VSS, IEEE 1583

34

35 D

36

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

43 Association: testing, security

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

Appendix A Glossary

- 1
2 **Data Integrity:** Invulnerability of the system to accidental intervention or deliberate,
3 fraudulent manipulation that would result in errors in the processing of data. It is
4 distinguished from data accuracy that encompasses internal, system-generated
5 errors.
6 Association: security
7 Source: IEEE 1583
8
- 9 **Decertification:** Withdrawal of certification of voting system hardware and software.
10 Association: testing, conformity assessment
11 Source: HAVA
12
- 13 **Decryption:** Process of changing ciphertext (i.e., encrypted text) into plaintext.
14 Association: security
15 Source: FIPS 81
16
- 17 **Design Entity:** Component of a design, named and referenced uniquely, that is both
18 structurally and functionally different from other elements.
19 Association: software engineering
20 Source: IEEE 1583
21
- 22 **Design Entity Attributes:** Named characteristic or property of a design entity, which
23 provides a statement of fact about the entity. Attributes define the design entity
24 and not the design process.
25 Association: software engineering
26 Source: IEEE 1583
27
- 28 **Designating Authority:** Body established within government or empowered by
29 government to designate conformity assessment bodies, suspend or withdraw their
30 designation or remove their suspension from designation.
31 Association: testing, conformity assessment
32 Source: ISO 17000
33
- 34 **Designation:** Governmental authorization of a conformity assessment body to perform
35 specified conformity assessment activities.
36 Association: testing, conformity assessment
37 Source: ISO 17000
38
- 39 **Device:** Functional unit that performs its assigned tasks as an integrated whole.
40 Association: IT
41 Source: VSS
42
- 43 **Digital Signature:** Asymmetric key operation where the private key is used to digitally
44 sign an electronic document and the public key is used to verify the signature.
45 Digital signatures provide authentication and integrity protection.

Appendix A Glossary

1 Association: security

2 Source: SP 800-63

3

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

10 Association: voting

11 Source: VSS, IEEE 1583

12

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

18 Association: voting, security

19 Source: no attribution

20

21 **Disability:** A physical or mental impairment that limits the ability of an individual, to
22 readily access and use a voting machine.

23 Association: human factors, HF: accessibility

24 Source: ADA

25

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

27 Association: security, voting

28 Source: no attribution

29

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

33 Association: security, voting

34 Source: no attribution

35

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

38 Association: voting

39 Source: no attribution

40

41 E

42

43 **EAC:** Election Assistance Commission (www.eac.gov)

44

Appendix A Glossary

1 **Early Voting:** Voter completes the ballot in person at a county office or other designated
2 polling site prior to Election Day. Also known as Early In-Person Voting or on-
3 site absentee voting.

4 Association: voting

5 Source: no attribution

6

7 **Election Coding:** See Election Programming.

8 Association: voting

9 Source: IEEE 1583

10

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

14 Association: voting

15 Source: VSS, IEEE 1583

16

17 **Election Definition:** Definition of the races and questions that will appear on the ballot
18 for a specific election.

19 Association: pre-voting

20 Source: no attribution

21

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

26 Association: voting

27 Source: VSS, IEEE 1583

28

29 **Election Management System:** Set of processing functions and databases within a
30 voting system that define, develop and maintain election databases, perform
31 election definition and setup functions, format ballots, count votes, consolidate
32 and report results, and maintain audit trails.

33 Association: voting

34 Source: VSS, IEEE 1583

35

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

38 Association: voting

39 Source: no attribution

40

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

43 Association: voting

44 Source: VSS, IEEE 1583

45

Appendix A Glossary

- 1 **Electronic Ballot Printer (EBP):** DRE-like device that fully prints paper-based ballots
2 with selected vote choices for tabulation by a separate ballot scanner.
3 Association: voting
4 Source: IEEE 1583
5
- 6 **Electronic Cast Vote Record (ECVR):** Deprecated, replaced by Cast Vote Record
7 (CVR).
8 Association: voting
9 Source: IEEE 1583
10
- 11 **Electronic Vote Capture System (EVCS):** Election system that encompasses DREs as
12 well as accessible ballot printers (ABPs) when they are combined with the ballot
13 scanner that processes the printed ballot. See also Voter Verified Paper Audit.
14 Association: voting
15 Source: IEEE 1583
16
- 17 **Electronic Voter Interface:** Subsystem within a DRE voting system which
18 communicates ballot information to a voter in video, audio or Braille form and
19 which allows the voter to select candidates and issues by means of vocalization or
20 physical actions.
21 Association: voting, Human factors, HF: accessibility
22 Source: FL Statutes
23
- 24 **Electronic Voting Machine:** Any system that utilizes an electronic component. Term is
25 generally used to refer to DREs. See also Voting Equipment, Voting System.
26 Association: voting
27 Source: NASS
28
- 29 **Electronically-Assisted Ballot Marker (EBM):** Machines that provide assistance to
30 voters who are visually impaired, who have difficulty reading English, or in other
31 cases where a voter has difficulty correctly marking by hand a preprinted paper
32 ballot that is to be counted in optical scan systems. The device marks, or helps to
33 mark selected vote choices on a previously inserted, preprinted paper ballot. The
34 machine then provides audio, tactile, or visual feedback to the voter on what
35 choices they have made on the ballot. The resulting ballots are later tabulated on
36 the same unit that processes ordinary hand-marked paper ballots.
37 Association: voting, human factors
38 Source: IEEE 1583
39
- 40 **Encryption:** Process of obscuring information (i.e., changing plain text into ciphertext)
41 for the purpose of security or privacy. See also Cryptographic Key, Decryption.
42 Association: security
43 Source: FIPS 81
44
45

Appendix A Glossary

1 **Ergonomics:** See Human Factors.

2

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

5 Association: security

6 Source: WordNet

7

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

12 Association: voting

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

14

15

16 **F**

17

18 **Federal Information Processing Standard (FIPS):** Standard for adoption and use by
19 federal agencies that has been developed and published by the National Institute
20 of Standards and Technology Information Technology Laboratory, a part of the
21 U.S. Department of Commerce.

22 Association: security, standardization

23 Source: no attribution

24

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

27 Association: IT

28 Source: IEEE 1583

29

30 **Fled Voter:** Voter who began the process of making ballot selections but exited the
31 polling site without casting the ballot. See also abandoned ballot.

32 Association: voting

33 Source: no attribution

34

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

37 Association: human factors, typography

38 Source: ANSI Dictionary

39

40 **Functional Configuration Audit (FCA):** Exhaustive verification of every system
41 function and combination of functions cited in the vendor's documentation. The
42 FCA verifies the accuracy and completeness of the system's Voter Manual,
43 Operations Procedures, Maintenance Procedures, and Diagnostic Testing
44 Procedures.

Appendix A Glossary

1 Association: testing, voting

2 Source: VSS, IEEE 1583

3

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

6 Association: testing

7 Source: VSS, IEEE 1583

8

9 **G**

10

11 **General Election:** Election in which voters, regardless of party affiliation, are permitted
12 to select candidates to fill public office and vote on ballot issues.

13 Association: voting

14 Source: VSS, IEEE 1583

15

16 **Guideline:** See standard.

17

18 **H**

19

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

25 Association: voting

26 Source: NIST SP 800-63

27

28 **HAVA:** Help America Vote Act of 2002, codified at 42U.S.C. GIS301-15545

29 Association: voting

30 Source: no attribution

31

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

35 Association: human factors

36 Source: ACM SIGCHI

37

38 **Human Factors:** Scientific discipline concerned with the understanding of interactions
39 between humans and other elements of a system, and the profession that applies
40 theory, principles, data and methods to design in order to optimize human well-
41 being and overall system performance.

42 Association: human factors

43 Source: IEA

44

Appendix A Glossary

I

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

Association: voting, security

Source: no attribution

Implementation Conformance Statement: See Implementation Statement.

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

Association: testing

Source: no attribution

Independent Testing Authority (ITA): Deprecated, replaced by Voting System Testing Laboratory. Prior usage referred to independent testing organizations certified by the National Association of State Election Directors (NASSED) to perform voting system qualification testing.

Association: testing, voting

Source: VSS

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

Association: security

Source: 44 U.S.C.

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

Association: testing, conformity assessment

Source: ISO 17000

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

Association: security

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

Appendix A Glossary

K

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

Association: security

Source: FIPS 140-2

L

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

Association: voting, testing

Source: IEEE 1583

Logical Correctness: Condition signifying that, for a given input, a computer program will satisfy the program specification and produce the required output.

Association: testing

Source: VSS, IEEE 1583

M

Marksense: System by which votes are recorded by means of marks made in voting response fields designated on one or both faces of a ballot card or series of cards. Marksense systems may use an optical scanner or similar sensor to read the ballots. Also known as Optical Scan.

Association: voting

Source: VSS, IEEE 1583

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

Association: voting

Source: VSS, IEEE 1583

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

Appendix A Glossary

1 Association: voting
2 Source: ME Statutes

3
4 **Multi-seat Contest:** Contest in which multiple candidates can run, up to a specified
5 number of seats. Voters may vote for no more than the specified number of
6 candidates. Also known as field race.

7 Association: voting
8 Source: NIST HF Rpt.

9

10 N

11

12 **NASED:** National Association of State Election Directors, (www.nased.org)

13

14 **National Certification Testing:** Examination and testing of a voting system by using
15 qualification test standards to determine if the system complies with the
16 qualification performance and other requirements of the Guidelines and with its
17 own specifications.

18 Association: testing, voting
19 Source: VSS

20

21 **National Certification Test Report:** Report of results of independent testing of a voting
22 system by an accredited test lab which is delivered to the EAC with a
23 recommendation regarding granting a Certification Number

24 Association: testing
25 Source: no attribution

26

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

28 Association: testing
29 Source: no attribution

30

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

33 Association: voting
34 Source: VS, IEEE 1583

35

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

39 Association: IT
40 Source: VSS, IEEE 1583

41

42 O

43

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

Appendix A Glossary

1

2 **Open Primary:** Primary election in which voters may vote, regardless of political
3 affiliation. Some states require voters to publicly declare their choice of party
4 ballot at the polling place, after which the poll worker provides or activates the
5 appropriate ballot. Other states allow the voters to make their choice of party
6 ballot within the privacy of the voting booth. Voters are also may be permitted to
7 vote on nonpartisan offices and ballot issues that are presented at the same
8 election.

9 Association: voting

10 Source: VSS, IEEE 1583

11

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

13 Association: voting, IT

14 Source: IEEE 1583

15

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

17 Association: voting, IT

18 Source: IEEE 1583

19

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

21 Association: voting

22 Source: IEEE 1583

23

24 **Overvotes:** Voting for more than the maximum number of selections allowed in a race.

25 Association: voting

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

27

28 **P**

29

30 **Paper-based Voting System:** Voting system that records votes using one or more ballot
31 cards or a written list of choices.

32 Association: voting

33 Source: VSS, IEEE 1583

34

35 **Paper Record:** Paper ballot image or summary that is a copy of the electronic record and
36 that is verifiable by a voter. See also ballot image.

37 Association: voting, security

38 Source: no attribution

39

40 **Partisan Office:** Elected office for which candidates run as representatives of a political
41 party.

42 Association: voting

43 Source: VSS, IEEE 1583

44

Appendix A Glossary

- 1 **Pass/Fail Criteria:** Decision factor or expected result used to determine if software or
2 hardware passes a test case.
3 Association: testing
4 Source: IEEE 1583
5
- 6 **Physical Configuration Audit (PCA):** (1) Inspection by a test lab that compares the
7 voting system components submitted for certification testing to the vendor's
8 technical documentation and confirms that the documentation submitted meets the
9 requirements of the Guidelines. Includes witnessing of the building of the
10 executable system to ensure that the release is built from the tested components.
11 Association: testing, voting
12 Source: (1) VSS, (2) IEEE 1583
13
- 14 **Point Size:** Method of measuring type, where the size of a font is measured from the top
15 of the tallest character to the bottom of the lowest character.
16 Association: human factors, typography
17 Source: no attribution
18
- 19 **Political Subdivision:** Any unit of government, such as counties and cities, school
20 districts, and water and conservation districts having authority to hold elections
21 for public offices or on ballot issues.
22 Association: voting
23 Source: VSS
24
- 25 **Polling Location:** Physical address of a polling place.
26 Association: voting
27 Source: VSS, IEEE 1583
28
- 29 **Polling Place:** Facility that is staffed by poll workers and equipped with voting
30 equipment, to which voters assigned to that precinct come to cast in-person
31 ballots.
32 Association: voting
33 Source: VSS, IEEE 1583
34
- 35 **Precinct:** Administrative division representing a geographic area in which voters cast
36 ballots at the same polling place. Voters casting absentee ballots may also be
37 combined into one or more administrative absentee precincts for purposes of
38 tabulating and reporting votes. Generally, voters in a polling place precinct are
39 eligible to vote in a general election using the same ballot format. In some
40 jurisdictions, however, the ballot formats may be different due to split precincts or
41 required ballot rotations within the precinct.
42 Association: voting
43 Source: VSS, IEEE 1583
44

Appendix A Glossary

1 **Precinct Count:** Counting of ballots in the same precinct in which those ballots have
2 been cast.

3 Association: voting

4 Source: no attribution

5

6

7 **Precision:** (1) Extent to which a given set of measurements of the same sample agree
8 with their mean. Thus, precision is commonly taken to be the standard deviation
9 estimated from sets of duplicate measurements made under conditions of
10 repeatability, that is, independent test results obtained with the same method on
11 identical test material, in the same laboratory or test facility, by the same operator
12 using the same equipment in short intervals of time. (2) Degree of refinement in
13 measurement or specification, especially as represented by the number of digits
14 given.

15 Association: testing, statistics

16 Source: IEEE 1583

17

18 **Primary Election:** Election held to determine which candidate will represent a political
19 party for a given office in the general election. Some states have an open
20 primary, while others have a closed primary. Sometimes elections for nonpartisan
21 offices and ballot issues are held during primary elections.

22 Association: voting

23 Source: VSS

24

25 **Primary Presidential Delegation Nomination:** Primary election in which voters choose
26 the delegates to the Presidential nominating conventions allotted to their states by the
27 national party committees.

28 Association: voting

29 Source: VSS

30

31 **Privacy:** Preventing other parties from knowing how a voter voted.

32 Association: security, voting

33 Source: no attribution

34

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

37 Association: security

38 Source: NIST SP 800-63

39

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

44 Association: standardization

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

Appendix A Glossary

1

2 **Provisional Ballot:** Ballot provided to individuals who claim they are registered and
3 eligible to vote but whose eligibility or registration status cannot be confirmed
4 when they present themselves to vote. Once voted, such ballots must be kept
5 separate from other ballots and are not included in the tabulation until after the
6 voter's eligibility is confirmed. See also challenged ballot.

7 Association: voting

8 Source: VSS, IEEE 1583, NASS, HAVA

9

10 **Public Information Package (PIP):** Data published openly and made available to the
11 public without restriction.

12 Association: testing

13 Source: no attribution

14

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

17 Association: security

18 Source: NIST SP 800-63

19

20 **Public Key Certificate:** Digital document issued and digitally signed by the private key
21 of a Public Key Certification Authority that binds the name of a subscriber to a
22 public key. The certificate indicates that the subscriber identified in the certificate
23 has sole control and access to the private key.

24 Association: security

25 Source: NIST SP 800-63

26

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

31 Association: voting

32 Source: VSS

33

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

37 Association: voting

38 Source: VSS, IEEE 1583

39

40 Q

41

42 **Qualification Number:** Changed, replaced by Certification Number for EAC system
43 certification process. A number issued by NASED (National Association of State
44 Election Directors) to a system that has been tested by certified Independent

Appendix A Glossary

1 Testing Authorities for compliance with the voting system standards. Issuance of
2 a Qualification Number indicates that the system is qualified for use in federal
3 elections.

4 Association: testing, voting

5 Source: VSS

6

7 **Qualification Test Report:** Changed, replaced by National Certification Test Report for
8 EAC certification process.

9 Association: testing, voting

10 Source: VSS, NIST HB150

11

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

15 Association: testing

16 Source: IEEE 1583

17

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

20 Association: testing

21 Source: NIST HB 150

22

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

25 Association: testing, software engineering

26 Source: NIST HB 150

27

28 **R**

29

30 **Race:** Contest between candidates.

31 Association: voting

32 Source: no attribution

33

34 **Ranked Order Voting:** Practice that allows voters to rank candidates in a contest in
35 order of choice: 1, 2, 3 and so on. A candidate receiving a majority of the first
36 choice votes wins that election. If no candidate receives a majority, the last place
37 candidate is deleted, and all ballots are counted again, with each ballot cast for the
38 deleted candidate applied to the next choice candidate listed on the ballot. The
39 process of eliminating the last place candidate and recounting the ballots
40 continues until one candidate receives a majority of the vote. The practice is also
41 known as instant runoff voting, preferences or preferential voting, or choice
42 voting.

43 Association: voting

44

44 Source: VSS, IEEE 1583

Appendix A Glossary

1

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

3 Association: voting

4 Source: no attribution

5

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

11 Association: voting

12 Source: VSS

13

14 **Recertification:** National and/or State examination, and possibly retesting of a voting
15 system that was modified subsequent to receiving national and/or state
16 certification. The object of this process is to determine if the modification still
17 permits the system to function properly in accordance with the requirements.

18 Association: voting

19 Source: VSS, IEEE

20

21 **Record:** (noun) Data that are preserved by a voting system, not necessarily in any
22 particular form. (verb) To preserve such data.

23 Association: voting

24 Source: no attribution

25

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

31 Association: security

32 Source: NIST SP 800-53

33

34 **Recount:** Retabulation of the votes cast in an election.

35 Association: voting

36 Source: no attribution

37

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

40 Association: voting

41 Source: NIST HF Rpt.

42

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

Appendix A Glossary

- 1 Association: testing, conformity assessment
2 Source: ISO 5725
3
- 4 **Reproducibility:** Ability to obtain test results with the same test method on identical test
5 items in different testing laboratories with different operators using different
6 equipment.
7 Association: testing, conformity assessment
8 Source: ISO 5725
9
- 10 **Requirement:** Provision that conveys criteria to be fulfilled. See also compliance point.
11 Association: testing, standardization
12 Source: NIST HB 150
13
- 14 **Residual Vote:** Total number of votes that cannot be counted for a specific contest.
15 There may be multiple reasons for residual votes (e.g., declining to vote for the
16 contest, overvoting in a contest, failure to cast ballot before leaving polling place).
17 Association: voting, human factors
18 Source: NIST HF Rpt.
19
- 20 **Risk Assessment:** Process of identifying the risks to system security and determining the
21 probability of occurrence, the resulting impact, and asafeguards that would
22 mitigate this impact.
23 Association: security
24 Source: NIST SP 800-30
25
- 26 **Rolloff:** Difference between number of votes cast for contests in the higher offices on the
27 ballot and the number cast for contests that are lower on the ballot. It is sometimes
28 referred to as voter fatigue.
29 Association: voting, human factors
30 Source: NIST HF Rpt.
31
- 32 **Runoff Election:** Election to select a winner following a primary or a general election, in
33 which no candidate in the contest received the required minimum percentage of
34 the votes cast. The two candidates receiving the most votes for the race in
35 question proceed to the runoff election.
36 Association: voting
37 Source: VSS, IEEE 1583
38
- 39 **S**
40
- 41 **Second Chance Voting:** Provides that voters are notified when their ballots contain
42 errors and are given a chance to correct them. Required by HAVA 2002.
43 Association: voting
44 Source: NASS

Appendix A Glossary

1

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

6 Association: security

7 Source: NIST SP 800-57

8

9 **Section 508:** 1998 amendment, to the Rehabilitation Act to require federal agencies to
10 make their electronic and information technology accessible to people with
11 disabilities. Section 508 was enacted to eliminate barriers in information
12 technology.

13 Association: HF: accessibility

14 Source: no attribution

15

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

19 Association: security

20 Source: FIPS 199, NIST SP 800-53

21

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

27 Association: voting

28 Source: no attribution

29

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

32 Association: standardization

33 Source: ISO Guide 2-4

34

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

38 Association: voting

39 Source: VSS, IEEE 1583

40

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

42 Association: voting

43 Source: no attribution

44

Appendix A Glossary

1 **Standard:** Document established by consensus and approved by a recognized body that
2 provides, for common and repeated use, rules, guidelines or characteristics for
3 activities or their results, aimed at the achievement of the optimum degree of
4 order in a given context. See Guideline.

5 Association: standardization

6 Source: ISO Guide 2-4

7

8 **Standard, Product:** Standard that specifies requirements to be fulfilled by a product or a
9 group of products, to establish its fitness for purpose. A product standard may
10 include, in addition to the fitness for purpose requirements, directly or by
11 reference, aspects such as terminology, sampling, testing, packaging, and labeling
12 and sometimes processing requirements.

13 Association: standardization

14 Source: ISO Guide 2-6

15

16 **Standard, Testing:** Standard that is concerned with test methods, sometimes
17 supplemented with other provision related to testing, such as sampling, use of
18 statistical methods, or sequence of tests.

19 Association: standardization

20 Source: ISO Guide 2-6

21

22 **Standard on Data to Be Provided:** Standard that contains a list of characteristics for
23 which values or other data are to be stated for specifying the product, process, or
24 service.

25 Association: standardization

26 Source: ISO Guide 2-4

27

28 **State Certification:** State examination and possibly testing of a voting system to
29 determine its compliance with state laws, regulations, and rules and any other
30 state requirements for voting systems.

31 Association: testing, conformity assessment, voting

32 Source: VSS

33

34 **Static Voting System Software:** Software that does not change based on the election
35 being conducted or the voting equipment upon which it is installed, e.g.,
36 executable code. See also voting system software.

37 Association: voting

38 Source: no attribute

39

40 **Straight Party Voting:** When voters are permitted a vote for all candidates on the ballot
41 from a single political party by making only a single selection.

42 Association: voting

43 Source: VSS, IEEE 1583

44

45

Appendix A Glossary

1 **Support Software:** Software that aids in the development or maintenance of other
2 software, for example, compilers, loaders and other utilities.

3 Association: IT

4 Source: VSS, IEEE 1583

5

6 **Symmetric (Secret) Encryption Algorithm:** Encryption algorithms using the same
7 secret key for encryption and decryption.

8 Association: security

9 Source: NIST SP 800-49

10

11 T

12

13 **Tabulation:** See Count.

14 Association: voting

15 Source: VSS, IEEE 1583

16

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

21 **Association:** Human Factors, HF: accessibility

22 **Source:** ANSI C63.19

23

24 **Tabulator:** Device that counts votes.

25 Association: voting

26 Source: no attribution

27

28 **Technical Data Package:** Vendor documentation relating to the voting system required
29 to be submitted with the system as a precondition of certification testing.

30 Association: testing, voting

31 Source: VSS

32

33 **Telecommunications:** Transmission, between or among points specified by the user, of
34 information of the user's choosing, without change in the form or content of the
35 information as sent and received.

36 Association: IT

37 Source: IEEE 1583

38

39 **Test:** Technical operation that consists of the determination of one or more
40 characteristics of a given product, process or service according to a specified
41 procedure.

42 Association: testing

43 Source: ISO Guide 2-4, NIST HB 150

44

Appendix A Glossary

- 1 **Test Campaign:** Sum of the work by a voting system test lab on a single product or
2 system from contract through test plan, conduct of testing for each requirement
3 (including hardware, software, and systems), reporting, archiving, and responding
4 to issues afterwards.
5 Association: testing, voting
6 Source: NIST HB 150-22
7
- 8 **Test Case Specification:** Document identifying the specific inputs and expected result
9 for each test identified in the test plan.
10 Association: testing
11 Source: IEEE 1583
12
- 13 **Test Design Specification:** Expanded detail of the test approach identified in the test
14 plan for the related tests.
15 Association: testing
16 Source: IEEE 1583
17
- 18 **Test Method:** Specified technical procedure for performing a test.
19 Association: testing, conformity assessment
20 Source: ISO Guide 2
21
- 22 **Test Plan:** Document created prior to testing that outlines the scope and nature of testing,
23 items to be tested, test approach, resources needed to perform testing, test tasks,
24 risks and schedule.
25 Association: testing, conformity assessment
26 Source: IEEE 1583
27
- 28 **Testing:** Determination of one or more characteristics of an object of conformity
29 assessment, according to a procedure. Testing typically applies to materials,
30 products, or processes.
31 Association: testing, conformity assessment
32 Source: ISO 17000
33
- 34 **Testing Authority:** Organization that performs national certification testing and provides
35 recommendations to EAC regarding voting system certification. See also Voting
36 System Testing Laboratory.
37 Association: testing, conformity assessment
38 Source: no attribution
39
- 40 **Touch Screen Voting Machine:** Machine that utilizes a computer screen whereby a
41 voter executes their choices by touching designated locations on the screen; the
42 resulting electrical signals are then tabulated within the machine.
43 Association: voting
44 Source: no attribution
45

Appendix A Glossary

1 **Traceability:** Ability to relate a property of the result of a measurement or the value of a
2 standard to stated references.

3 Association: testing

4 Source: VIM

5

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

7 Association: human factors

8 Source: ANSI Dict.

9

10 U

11

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

15 Association: testing

16 Source: VIM, NIST HB 150

17

18 **Undervote:** (1) Occurs when the number of choices selected by a voter in a contest is
19 less than the maximum number allowed for that contest or when no selection is
20 made for a single choice race.

21 Association: voting

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

23

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

31 Association: Human factors, HF: usability

32 Source: ISO 9241, NIST HF Rpt

33

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

37 Association: human factors, HF: usability

38 Source: Usability First Usability Glossary

39

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

41 Association: vote, test

42 Source: IEEE 1583

43

44

Appendix A Glossary

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44

Valid Vote: Vote from a ballot or ballot image is legally acceptable according to state law.

Association: voting

Source: no attribution

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

Association: testing

Source: VSS

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

Association: testing

Source: VSS

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

Association: testing

Source: IEEE 1583

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

Association: voting, human factors, HF: accessibility

Source: FL Statutes

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

Association: voting

Source: no attribution

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

Association: voting

Source: VSS, IEEE 1583

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

Association: voting

Source: no attribution

Appendix A Glossary

- 1 **Voter Registration System:** Set of processing functions and data storage that maintains
2 records of eligible voters.
3 Association: pre-voting
4 Source: VSS
5
- 6 **Voter Verified Audit Record:** (1) Human-readable printed record of all of a voter's
7 selections presented to the voter to view and check for accuracy.
8 Association: voting
9 Source: IEEE 1583
10
- 11 **Voter-Verified Paper Audit Trail (VVPAT):** See Voter Verified Audit Record.
12
- 13 **Voting Environment:** Aspects of the voting milieu outside of the voting system that are
14 encountered by voters, e.g., ramps, lighting, noise, temperature, electro-magnetic
15 interference. See also voting equipment operational environment.
16 Association: human factors, voting
17 Source: no attribution
18
- 19 **Voting Equipment:** Any mechanical, electromechanical, or electronic components of a
20 voting system. See also Electronic Voting Machine.
21 Association: voting
22 Source: no attribution
23
- 24 **Voting Equipment Operational Environment:** All software, hardware (including
25 facilities, furnishings and fixtures), materials, documentation, and the interface
26 used by the election personnel, maintenance operator, poll worker, and voter,
27 required for voting equipment operations. See also voting environment.
28 Association: voting
29 Source: IEEE 1583
30
- 31 **Voting Equipment Operations Procedures:** Ordered steps that election personnel, poll
32 workers or voters follow for their respective activities related to voting
33 equipment.
34 Association: voting
35 Source: IEEE 1583
36
- 37 **Voting Equipment User Documentation:** Electronic or printed material that provides
38 information for the election officials or voters.
39 Association: voting
40 Source: IEEE 1583
41
- 42 **Voting Machine:** Mechanical or electronic equipment for the direct recording and
43 tabulation of votes. See also voting system.
44 Association: voting
45 Source: OH Statutes

Appendix A Glossary

1

2 **Voting Officials:** Term used to designate the group of people associated with elections,
3 including election personnel, poll workers, ballot designers and those responsible
4 for the installation, operation and maintenance of the voting systems.

5 Association: voting

6 Source: no attribution

7

8 **Voting Position:** Specific response field on a ballot where the voter indicates the
9 selection of a candidate or ballot proposition response

10 Association: voting

11 Source: VSS, IEEE 1583

12

13 **Voting Process:** Entire array of procedures, people, resources, equipment and locations
14 as associated with the conduct of elections.

15 Association: voting

16 Source: no attribution

17

18 **Voting Station:** Location within the polling place where voters may record their votes.
19 A voting station includes the voting booth or enclosure and the vote-capture and
20 recording device.

21 Association: voting

22 Source: VSS, IEEE 1583

23

24 **Voting System:** The integrated mechanical, electromechanical, or electronic equipment
25 and software required to program, control, and support the equipment that is used
26 to define ballots; to cast and count votes; to report and/or display election results;
27 and to maintain and produce all audit trail information. It additionally includes the
28 associated documentation used to operate the system, maintain the system,
29 identify system components and their versions, test the system during its
30 development and maintenance, maintain records of system errors and defects, and
31 determine specific changes made after system certification. A voting system may
32 also include the transmission of results over telecommunication networks. See
33 also electronic voting machine, voting equipment, voting machine.

34 Association: voting

35 Source: VSS

36

37 **Voting System Software:** All the executable code and associated configuration files
38 needed for the proper operation of the voting system regardless of the location of
39 installation and functionality provided. This includes third party software such as
40 operating systems, drivers, etc. See also dynamic voting system software, semi-
41 static voting system software, and static voting system software.

42 Association: voting

43 Source: no attribution

44

Appendix A Glossary

1 **Voting System Testing:** Examination and testing of a computerized voting system by
2 using test methods to determine if the system complies with the requirements in
3 the Voluntary Voting System Guidelines and with its own specifications.

4 Association: testing

5 Source: VSS

6

7 **Voting System Test Laboratory:** Test laboratory accredited by the National Voluntary
8 Laboratory Accreditation Program (NVLAP) to be competent to test voting
9 systems. When NVLAP has completed its evaluation of a test lab, the Director of
10 NIST will forward a recommendation to the EAC for the completion of the
11 accreditation process.

12 Association: testing

13 Source: NIST HB 150-22

14

15 **VVPAT-Ballot Box:** Ballot box where the paper record of each voter's vote is deposited.

16 Association: security, voting

17 Source: no attribution

18

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

22 Association: security, voting

23 Source: no attribution

24

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

28 Association: security, voting

29 Source: no attribution

30

31

W

32

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

35 Association: voting

36 Source: no attribution

37

38 **Write-in Voting:** To make a selection of an individual not listed on the ballot. In some
39 jurisdictions, voters may do this by using a marking device to physically write
40 their choice on the ballot or they may use a keypad, touch screen or other
41 electronic means to enter the name, depending on the type of voting system in
42 use.

43 Association: voting

44 Source: VSS, IEEE 1583

Appendix A Glossary

- 1
- 2 **Workspace:** See voting station.
- 3 Association: voting
- 4 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 Dictionary 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 81 Federal Information Processing Standard 81, DES Modes of Operations, December, 1980.
- 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.

Appendix A Glossary

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

Appendix A Glossary

1	NIST SP 800-53	NIST Special Publication 800-53 Recommended Security Controls for
2		Federal Information Systems, Appendix B, Glossary.
3		
4	NIST SP 800-59	NIST Special Publication 800-59 Guideline for Identifying an
5		Information System as a National Security System, August 2003.
6		
7	NIST SP 800-63	NIST Special Publication 800-63 Electronic Authentication Guideline:
8		Recommendations of the National Institute of Standards and
9		Technology, June 2004.
10		
11	OH Statutes	Ohio HB-262 enacted 5/7/2004.
12		
13	OMB A130	OMB Circular A-130, Appendix III.
14		
15	Section 508	Electronic and Information Technology Accessibility Standards (2002)
16		Architectural and Transportation Barriers Compliance Board, 36 CRF
17		Part 1194, http://www.accessboard.gov/sec508/508standards.htm .
18		
19	Usability	Usability First Usability Glossary,
20	Glossary	http://www.usabilityfirst.com/glossary/main.cgi , (February 2005).
21		
22	VIM	The ISO International Vocabulary of Basic and General Terms in
23		Metrology (VIM), 1994.
24		
25	VSS	Voting Systems Standards of 2002 (Federal Election Commission),
26		Volumes I and II.
27		
28	Whatis.com	Whatis.com, IT Encyclopedia,
29		http://whatis.techtarget.com/definition/0,,sid9_gci491925,00.html
30		(February 2005).
31		
32	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. There will be a
19 transition period where both terms are in use at the same time.

20

21 Changed Term

22 Electronic Cast Vote Record

23 Qualification Number

24 Qualification Test Report

25 Qualification Testing

26

27

28

29

30

31

32

Replaced by

Cast Vote Record

Certification Number

National Certification Test Report

National Certification Testing