

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE BILL

No. 2654 Session of
2000

INTRODUCED BY ORIE, STEVENSON, FAIRCHILD, CALTAGIRONE, M. COHEN,
McILHATTAN, RAMOS, MANDERINO, WILT, YOUNGBLOOD, JOSEPHS,
RUBLEY AND STEELMAN, JUNE 26, 2000

REFERRED TO COMMITTEE ON STATE GOVERNMENT, JUNE 26, 2000

AN ACT

1 Amending the act of June 3, 1937 (P.L.1333, No.320), entitled
2 "An act concerning elections, including general, municipal,
3 special and primary elections, the nomination of candidates,
4 primary and election expenses and election contests; creating
5 and defining membership of county boards of elections;
6 imposing duties upon the Secretary of the Commonwealth,
7 courts, county boards of elections, county commissioners;
8 imposing penalties for violation of the act, and codifying,
9 revising and consolidating the laws relating thereto; and
10 repealing certain acts and parts of acts relating to
11 elections," providing for the utilization of Internet voting
12 systems.

13 The General Assembly of the Commonwealth of Pennsylvania
14 hereby enacts as follows:

15 Section 1. The act of June 3, 1937 (P.L.1333, No.320), known
16 as the Pennsylvania Election Code, is amended by adding an
17 article to read:

18 ARTICLE XI-B

19 Internet Voting Systems

20 Section 1101-B. Definitions.--As used in this article:

21 "Clean operating system" means a copy of a computer operating
22 system that has been provided by the Secretary of the

1 Commonwealth and is certified by the secretary to be free of any
2 malicious software coding that could disrupt or invalidate an
3 election.

4 "Computer virus" means any type of computer program that
5 includes coding intended to cause damage or do something
6 malicious to a computer system such as corrupting files or
7 destroying or altering data.

8 "Decryption key" means an electronic key used by county
9 election officials to decrypt the encrypted ballots into a plain
10 text form that is convenient for canvassing.

11 "Denial of service attack" means an attack that generates
12 enough traffic to an Internet site that it denies service to
13 legitimate users.

14 "Internet voting machine" means a voting machine that allows
15 the elector to cast a ballot over the Internet by means of a
16 connection to an Internet voting system.

17 "Internet voting system" means a secure networked electronic
18 election system, as described in section 1106-B.

19 "PIN" means a personal identification number issued by the
20 Secretary of the Commonwealth for use in counties utilizing
21 Internet voting systems.

22 "Secretary." The Secretary of the Commonwealth.

23 Section 1102-B. Powers and Duties.--(a) The secretary shall
24 establish all standards and adopt all rules and regulations
25 required to be adopted by the secretary under this article. The
26 secretary shall take all steps necessary to implement the
27 Internet elections services authorized by this article for the
28 election immediately following the election at which the
29 enactment of this article is approved by the electors.

30 (b) The secretary, utilizing the best and most secure method

1 available, shall generate a data base of unique PINs for each
2 county that will be using an Internet voting system to assign to
3 electors.

4 (c) The secretary shall design and certify a clean operating
5 system for use in the Internet voting systems that shall be
6 easily and readily usable by the election districts. At least
7 twenty days prior to the election, the secretary shall provide
8 to the counties a sufficient number of copies of the operating
9 system for each polling place within the counties.

10 Section 1103-B. Authorization of Internet Voting Systems for
11 Use at Polling Places.--Any county may, by a majority vote of
12 its qualified registered electors voting thereon cast at any
13 election, authorize and direct the use of an Internet voting
14 system for registering or recording and computing the vote at
15 all elections and primaries held at polling places in that
16 county.

17 Section 1104-B. Placing the Question on the Ballot; Election
18 Thereon.--(a) In accordance with section 1103-A, the county
19 board may, upon their own motion, submit to the qualified
20 registered electors of the county, at any election, the question
21 "Shall an Internet voting system be used at polling places in
22 the (county) of?"

23 (b) The county board, upon the filing of a petition signed
24 by qualified registered electors of the county, equal in number
25 to at least ten (10) per centum of the total number of electors
26 who voted in said county at the preceding gubernatorial
27 election, but in no case less than fifty, shall, at the next
28 election, occurring at least sixty days thereafter, submit to
29 the qualified registered electors of such county, the question
30 "Shall an Internet voting system be used at polling places in

1 the county of?"

2 Section 1105-B. Installation of Internet Voting Systems.--

3 (a) If a majority of the qualified registered electors voting
4 on the question in any county vote in favor of the adoption of
5 an Internet voting system, the county board of that county shall
6 purchase, lease or otherwise procure for each election district
7 of such county, the components of an Internet voting system of a
8 kind approved by the secretary. The board shall notify the
9 secretary in writing that they have selected and purchased an
10 approved Internet voting system.

11 (b) The installation throughout the county of the Internet
12 voting system adopted by the county board shall follow the
13 procedures established in section 1104-A.

14 Section 1106-B. Establishment of Standards and Process of
15 Approval for Internet Voting Systems.--(a) The secretary shall
16 establish standards that an Internet voting system is required
17 to satisfy before the Internet voting system may be issued a
18 permit by the secretary authorizing its use for an elections
19 purpose authorized by this article.

20 (b) To qualify for use in an election, an Internet voting
21 system shall demonstrate the existing capacity to do all of the
22 following:

23 (1) Provide for the secure identification and authentication
24 of any information transmitted on the system, including, but not
25 limited to, personal information required to be provided by
26 qualified electors.

27 (2) Provide for the secure identification and authentication
28 of all elections officials and electoral jurisdictions, their
29 servers, and all other related electronic equipment being used
30 by the elections officials and electoral jurisdictions

1 supervising and responsible for voting.

2 (3) Protect the privacy, integrity and anonymity of each
3 qualified elector's ballot.

4 (4) Prevent the casting of multiple ballots in any one
5 election cycle by any qualified elector.

6 (5) Provide protection against tampering, fraudulent use,
7 illegal manipulation or other abuse by voters, elections
8 officials or any other individual or group.

9 (6) Legibly convey all information mandated by law to be
10 included in the ballot for each qualified elector, including
11 lists of all candidates for office and all ballot measures
12 qualified to appear on the ballot, in any set or randomly
13 generated order mandated by law.

14 (7) Provide the means by which qualified electors may cast
15 write-in votes for candidates whose names do not appear on the
16 ballot.

17 (8) Provide uninterrupted, reliable availability during the
18 voting period established by law.

19 (9) Be readily accessible and easy to use for all qualified
20 electors.

21 (10) Be usable by qualified electors with disabilities,
22 consistent with the Americans with Disabilities Act of 1990
23 (Public Law 101-336, 104 Stat. 327 § 12101).

24 (11) Be capable of being upgraded as technology improves.

25 (12) Be capable of archiving votes, allowing recounts and of
26 being audited as to contents, results and process at a
27 sufficient level to guarantee the integrity of the system and
28 the public's confidence in its integrity.

29 (13) Be capable of transmitting encrypted information over a
30 secure network.

1 (14) Be capable of establishing an Internet website that
2 securely receives ballots, provides ballots to qualified
3 electors that reflect the elections in their electoral
4 jurisdictions and is maximally resistant to being interrupted or
5 shut down by denial of service, computer virus or other attacks.

6 (15) Be capable of tabulating ballots cast to its Internet
7 website.

8 (16) Be capable of providing qualified electors with
9 receipts showing that their votes have been received without
10 alteration, validated as coming from a qualified elector who has
11 not yet cast a ballot and stored for counting.

12 (c) Before a question about the use of an Internet voting
13 system may be placed upon the ballot in any county, the
14 secretary shall approve and certify a sufficient number of
15 systems for use within this Commonwealth to ensure adequate
16 bidding opportunities.

17 (d) The secretary shall:

18 (1) Examine each proposed Internet voting system.

19 (2) Perform the tests necessary to establish that the
20 Internet voting system conforms to the requirements of section
21 1104-B and the standards adopted by the secretary pursuant to
22 this section.

23 (3) Approve and certify that the Internet voting system is
24 fit for use and issue a permit authorizing its use.

25 (4) Deny approval and certification of the Internet voting
26 system which denial shall specify in writing the reasons
27 therefore within thirty days of the submission of the request
28 for approval.

29 (e) Once the secretary has approved and certified an
30 Internet voting system, the system shall be designated as

1 approved by the secretary for use by electors in all electoral
2 jurisdictions within this Commonwealth.

3 Section 1107-B. Election Day Procedures and the Process of
4 Voting.--(a) In any county which uses an Internet voting
5 system, the following procedures will be applicable for the
6 conduct of the election at the election district:

7 (1) At least one hour before the time set for the opening of
8 the polls at each election, the county board shall deliver to
9 each election district a sealed copy of a clean operating system
10 contained on suitable write-once media approved and provided by
11 the secretary for use in starting the Internet voting machines.

12 (2) The members of the district election board shall arrive
13 at the polling place at least one-half hour before the opening
14 of the polls. Prior to the commencement of the election, the
15 district election board shall inspect the district components of
16 the Internet voting system to see that they are in proper
17 working order and shall break the seal of the operating system
18 and insert it into the Internet voting machine and start the
19 machine.

20 (3) A qualified elector who wishes to utilize the Internet
21 voting machine procedure shall be permitted to vote at any
22 polling place within the elector's county of residence.

23 (4) A qualified elector, after receiving his PIN from
24 district election officials, shall retire to one of the voting
25 booths in which the Internet voting machines are located.

26 (5) The elector shall visit the Internet balloting web page
27 for his county and authenticate himself to that server by
28 entering his PIN and any personal information required for
29 authentication and request a ballot.

30 (6) The server shall send an image of the appropriate ballot

1 back to the elector.

2 (7) The elector shall mark the ballot with the keyboard,
3 mouse or touch screen if the machine is so equipped.

4 (8) When the elector is finished making his choices, he
5 shall click a button on the screen to send the ballot. A screen
6 will then be displayed that shows all of the elector's choices
7 for verification. When the elector confirms the selections, the
8 ballot is encrypted and sent to the central vote server. If the
9 elector does not confirm the selections, the ballot is reset and
10 he has the option of remarking the ballot.

11 (9) When the vote server receives the ballot, it will verify
12 that it has been sent from a qualified elector who has not yet
13 voted and has not been altered in any form during transmission.

14 (10) Once the vote has been verified, the server will send
15 feedback to the voter acknowledging that the vote has been
16 accepted.

17 (11) The server then separates the vote from the
18 identification of the elector and stores the vote for counting.

19 (12) After the polls close for the day, the county elections
20 officials, one being from each party, shall enter their separate
21 decryption keys so that the ballots can be decrypted and
22 canvassed.

23 Section 1108-B. Tampering with Internet Voting System.--Any
24 election officer or other person who shall unlawfully tamper
25 with or injure or attempt to injure any component of an Internet
26 voting system to be used at any primary or election, or who
27 shall prevent or attempt to prevent the correct operation and
28 communication of such a system, or any unauthorized person who
29 shall make or have in his possession a decryption key to an
30 Internet voting system to be used or being used in any primary

1 or election, shall be guilty of a misdemeanor and, upon
2 conviction thereof, shall be sentenced to pay a fine not
3 exceeding five thousand dollars (\$5,000), or to undergo an
4 imprisonment of not less than seven years not more than ten
5 years, or both, at the discretion of the court.

6 Section 2. This act shall take effect in 60 days.