Validation of an Electors Ballot
Using Various Voting Systems

At the EAC hearing on May 5, 2004, Commissioner Hillman asked the members of the Technical Panel to provide her with a brief description of how an elector can validate their ballots on the various types of voting systems in current use. The following is my response to that request.

Lever Machines: The voter makes selections on a lever voting machine by moving levers on the face of the machine. An elector that votes on a mechanical lever voting machine can only validate their ballot by visually inspecting the positions of the levers on the face of the machine prior to casting the ballot. The machine mechanically prevents over-votes but does allow under-votes. When the elector casts the ballot, usually by moving a large lever, the elector's selections are recorded in the vote registers on the machine and the levers are returned to their original positions. There is no recorded image of the electors's ballot.

Punch Card Ballots: There are two types of punch card ballots. On one type the elector uses a stylus to punch out pre-scored locations that correspond to positions on the ballot. On the other type the voter uses a mechanical device to punch locations on the edge of the ballot that correspond to the positions on the ballot. The most common system is the former. This is the system that gained infamy in Florida with images of hanging chad and pregnant chad.

In either punch card system the elector can validate their ballot by comparing the punches in the card with the punch locations specified in the ballot booklet. The ballot booklet has punch location numbers beside each ballot location and these numbers are printed on the ballot card beside the corresponding punch locations. This is a very cumbersome process and it is unlikely that many elector's have the ability or the patience to complete this validation process.

An elector that detects an error on their ballot is allowed to 'spoil' that ballot and cast another ballot. Most jurisdictions allow each voter up to five spoiled ballots.

Optical Scan Ballots: There are two types of optical scan voting systems: precinct count and central count. In a precinct count system the elector inserts their ballot into a counter at the precinct. This counter can be programmed to return an over-voted or under-voted ballot to the elector for correction. In this system, the voter has two opportunities to validate the ballot. The ballot can be visually inspected by the voter before it is inserted into the precinct ballot counter or, as a separate check, the ballot can be returned to the elector if it contains an over-vote or under-vote. Under-voting is usually deliberate; however, over-voting is usually un-intentional. Thus, most jurisdictions only program the counter to return the ballot to the elector in the event of an over-vote.

In the central count optical scan system, the voter can only validate the ballot visually before it is deposited in the ballot box. The ballot boxes are transported to a central location for tallying and, thus, the elector does not have a second chance to validate the ballot.

An elector that detects an error on an optical scan ballot is allowed to 'spoil' that ballot and cast another ballot. As with punch cards, most jurisdictions allot each voter up to five spoiled ballots.

DRE Voting Systems: The DRE voting system has several features that facilitate validation of the ballot. First, like the lever machine, the DRE voting system does not allow over-votes. If the elector attempts to over-vote the system will not accept the second selection. Under-voting is allowed. The DRE voting systems, as required in the AEC Standards, presents the elector with a summary screen of the elector's choices. This summary screen appears as the last screen in the voting process and displays all of the elector's choices. On this screen, under-votes are highlighted and the voter can return to the under-voted contest by touching the highlighted portion of the screen.

Thus, on a DRE voting system the elector's ballot is validated by not allowing over-votes and presenting a summary screen listing all choices and highlighting under-votes.

The elector is allowed to change their selections as many times as they wish before casting their ballot.

It should also be noted that the DRE voting system is the only voting system that allows the visually handicapped elector the opportunity to cast and validate their ballot without assistance.

Submitted by:

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