## Ballot Control by printing a 15 digit unique random number ballot ID on each ballot

- prevent illegal ballots being printed
- confirm ballots from a precinct were sent to that precinct
- preserve the secret ballot
- allow each individual voter to confirm after the election that their ballot was counted and not modified.

Ballot control is achieved when a county Election Director can easily identify ballots printed by the county and distinguish them from fraudulent ballots that were not. Printing a 15 digit unique random number ID on each ballot from a list of "valid" ballot ID numbers is a useful way of accomplishing ballot control.

Creating a list of "valid" ballot ID numbers – A list of 100,000 15 digit unique random numbers is easily created on the internet and stored on a thumb drive. The list must be guarded and secured.

**Producing Ballots for Vote-by-Mail** – Ballots are printed by vendor 1, valid ID numbers are added to the ballots by vendor 2, ballots are stuffed in envelopes by vendor 3, envelopes are addressed by vendor 4. No vendor can know the ballot ID that was sent to a particular voter. Vendor 2 must be monitored while numbers are added to ballots.

**For Precinct Voting** – It is easy to know what ID numbers are on the ballots for each precinct. When the ballots from a precinct are returned, it is easy for a computer system to confirm the ballot ID numbers match those sent to that precinct.

**Preserving the Secret Ballot** – Only the voter that has opened their vote-by-mail envelope or selected their ballot from a stack have the opportunity to record the 15 digit ballot ID on their ballot because of the process that separates the ballot from the envelope that contains their signature in vote-by-mail and they can conceal it with their hand when they select a ballot in person and return their ballot to a voted ballot container.

**Ballot Processing** – The first additional processing step is to scan the ballot ID's of ballots that are surplus and were not distributed to a voter and mark their numbers as "Not Distributed". Then the ballot ID numbers of cast ballots are scanned to confirm their ID numbers are valid and have not already been voted. If so, that number is marked as "voted" insuring only one ballot with that ID is allowed. Ballots that fail these tests need to be adjudicated.

Voter Confirms their vote was counted and not modified - This capability can achieved by an online system, made available after the vote is certified, that prompts a voter to enter the ballot ID they recorded when casting their ballot and then presents for the voter to view the image of their ballot that was tallied. When the image reflects their actual vote the voter is confident the system correctly processed their vote. Images not found or different from what the voter claimed must be adjudicated.

It is not likely that a malicious person can guess a valid ballot ID. A 15 digit number is a million billion. The chances of guessing a valid ballot ID from less than 100,000 ballots in Mesa County is 1 chance in 10 billion which is significantly less likely than being struck by lightning. If you did get lucky, you have no idea whose ballot you are looking at.

This system of gaining ballot control is similar to the system used to insure that a winning lottery ticket with the correct winning numbers, ink, and paper is not fraudulent. Only the lottery computer knows the correct 15 digit unique random number that was printed on the winning ticket(s) and you have the same incredibly small chance of guessing it.

Submitted by:

Ed Arnos