

Draft CVR Requirements for Next VVSG – CVR creation and export for adjudication, audit, and tabulation

John P. Wack
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These are brief requirements derived from the CVR CDF spec being developed currently. I also include whether (a) the corresponding data element in the CVR CDF is optional or required, and (b) my suggestion for whether the requirement should be optional or required in the CDF and in the next VVSG, in (a)-(b) form as follows:

- R-O – required in CDF and optional in next VVSG
- O-R – optional in CDF and required in next VVSG
- And so forth for R-R and O-O

Requirements:

1. Digital signature applied to entire export of CVRs (O-R)
2. Device ID:
 - a. ID of CVR creating device (manufacturer, model, serial number, or another ID) (O-R)
 - b. ID of device exporting the set of CVRs if not the same as creating device (O-R)
 - c. ID must include at least one of the following:
 - i. Manufacturer (O-O)
 - ii. Model (O-O)
 - iii. Serial number (O-O)
 - iv. Code associated with the device (O-O)
 - d. Name of the voting application on the device (O-R)
 - e. Geographical ID associated with the device, at least one of the following:
 - i. Code associated with the unit of geography (O-O)
 - ii. Name (O-O)
 - iii. Type of the geography, e.g., precinct, vote center, etc. (O-O)
3. ID of ballot style corresponding to the CVR (O-R)
4. ID of the corresponding voted ballot (if an ID is also associated with the ballot, e.g., impressed by a scanner) (O-R)
5. For multi-sheet ballots,
 - a. ID of the individual sheet corresponding to the CVR (R-R)
 - b. ID associated with the entire voted ballot (will be same for each sheet) (O-O)
6. An ID associated with an image file created by a scanner or ballot marking device of the corresponding voted ballot or set of voter choices (O-O)
7. Batch information:
 - a. ID of the batch containing the corresponding voted ballot (O-R)

- b. Sequence of the corresponding voted ballot in the batch (O-R)
8. Contest information:
- a. ID of all contests or ballot measures in which voter has made a ballot selection – must be at least one of the following:
 - i. Name of the contest (O-O)
 - ii. Abbreviation of the contest (O-O)
 - iii. Code associated with the contest (O-O)
 - b. Vote Variation for the contest (O-R)
 - c. Number of votes allowed and max number candidates elected for the contest (O-R)
 - d. Indications of overvoted and undervoted contests (R-R)
 - e. Indications of adjudications for contests (R-R)
9. Candidate information:
- a. ID of candidates or ballot measure choices as selected by the voter – must be one of the following:
 - i. Name of the candidate (O-O)
 - ii. Code associated with the candidate (O-O)
10. Ballot selection information:
- a. All ballot selections made by the voter for all supported vote variations (R-R)
 - b. If the creating device has overridden or changed ballot selections made by the voter, indication of that change and the reason for the change (R-R)
 - c. Position on the ballot associated with each ballot selection made by the voter (e.g., row number) (O-R)
 - d. Position on the ballot associated with each ballot selection made by the voter when multiple selections are permitted (e.g., column number) (O-R)
 - e. Indications of adjudications for ballot selections (R-R)
 - f. Indications of marginal marks not interpreted as valid voter selections (R-R)
 - g. Mark density/quality (O-O)
11. Write-in information:
- a. Indication of write-in selections made by the voter (R-R)
 - b. Adjudicated text of the write-in (R-R)
 - c. Image of the voter's write-in marks on the ballot (O-O)
 - d. An ID associated with an image file and a hash/signature of the image file (O-O)
 - e. Number of total write-ins in the CVR (R-O)
12. Party information:
- a. If ballot is for a partisan primary, ID of the party (R-R)
 - b. Party associated with a candidate (O-R)
 - c. At least one of the following:
 - i. Name of the contest (O-O)
 - ii. Abbreviation of the contest (O-O)
 - iii. Code associated with the contest (O-O)
13. Annotation information:
- a. Name of adjudicator(s) (O-O)
 - b. Date/Time of the adjudication(s) (O-O)
 - c. Adjudication(s) performed (O-O)