CVR export file format

The following document describes the CVR export file format. The format consists of several files which are grouped together in the same directory. All exported files have a top level attribute Version which is set to the version of EMS that produced the file.

Configuration

This file shows which parameters where selected by the user when performing the export. It contains the following attributes:

- IncludeTabulatorFilter: Boolean value indicating whether the export was performed for a single tabulator.
- TabulatorFilterValue: a numeric identifier of the tabulator that was exported.
- IncludeResultContainerFilter: Boolean value indicating whether the batch filter was used.
- ResultContainerFilterValue: an integer indicating the batch to export CVR data for.
- IncludePrecinctPortionFilter: Boolean value indicating whether the export was performed for a single precinct portion.
- PrecinctPortionFilterValue: an integer indicating the precinct portion to export CVR data for.
- IncludeBallotTypeFilter: Boolean value indicating whether the export was performed for a single ballot type.
- BallotTypeFilterValue: an integer indicating the ballot type to export CVR data for.
- IncludeContestFilter: Boolean value indicating whether the export was performed for a single contest.
- ContestFilterValue: an integer indicating the contest to export CVR data for.
- SplitFilesPerBatch: a Boolean value indicating whether separate CVR export JSON files should be created per batch.
- IncludeOnlyPublishedResultContainers: a Boolean value indicating whether only published result containers where included.

ContestManifest

This file contains a list of all non-disabled contests order by global order that can produce votes.
List is ordered by contest global order
Each contest has the following attributes:

- Description: name of the contest.
- Id: identifier of the contest (internal machine id)
- External Id: external identifier (optional)
- VoteFor: the number of votes allowed/number of positions to be elected.
- NumOfRanks: the number of rankings allowed to be made.

CandidateManifest

This file contains a list of all non-disabled candidates ordered by global order (first by contest, then by choice) that can produce votes (for example “No Candidate” are not included).

- Description: name of the candidate.
- Id: identifier of the candidate (internal machine id)

- External Id: external identifier (optional)
- ContestId: identifier of the contest this choice belongs to.
- Type: candidate type. Regular, Writein, NoPreference , QualifiedWriteIn.

PartyManifest

This file contains a list of political parties ordered by global order, each with the following attributes:

- Description: name of the political party
- Id: identifier of the party (internal machine id)
- External Id: external identifier (optional)

PrecinctPortionManifest

This file contains a list of all precinct portions ordered by global order, each with the following attributes:

- Description: name of the precinct portion
- Id: identifier of the precinct portion (internal machine id)
- External Id: external identifier (optional)

BallotTypeManifest

This file contains a list of all ballot types ordered by global order, each with the following attributes:

- Description: name of the ballot type
- Id: identifier of the ballot type (internal machine id)
- External Id: external identifier (optional).

BallotTypeContestManifest

This files contains information on which contests are used on which ballot types. Each relationship has the following attributes:

- BallotTypeId: identifier of the ballot type (internal machine id)
- ContestId: identifier of the contest (internal machine id).

CountingGroupManifest

This file contains a list of all counting groups ordered by global order, each with the following attributes:

- Description: name of the counting group
- Id: identifier of the counting group (internal machine id)
- External Id: external identifier (optional).

TabulatorManifest

This file contains a list of all tabulators ordered by global order, each with the following attributes:

- Description: name of the tabulator
- Id: identifier of the tabulator, we will use tabulator number here.
- ExternalId: the external string identifier (optional).
- ThresholdMin: minimum threshold for voting box scanned on this tabulator
- ThresholdMax: maximum threshold for voting box scanned on this tabulator
- WriteinThresholdMin: minimum threshold for write-in area scanned on this tabulator
- WriteinThresholdMax: maximum threshold for write-in area scanned on this tabulator

CVRExport

This file contains the actual CVR data. In addition to the top level version field it also has an ElectionId field that contains the description of the election.
The main content of the file is a list of CVR sessions. Each **Session** object contains the following attributes:

- TabulatorId: the tabulator id, same as the one used in the manifest
- BatchId: the batch id, unique for a given tabulator id.
- RecordId: the CVR id within the batch.
- CountingGroupId: the counting group id, same as the one used in the manifest.
- ImageMask: the file mask for finding the associated images with this session.
- Original element, contains the original state of the CVR data for this session.
- Modified element (optional), contains the modified state of the CVR data for this session.

Original/Modified element:
This element contains attributes that can be potentially be modified during adjudication/conditional voting management:

- PrecinctPortionId: the precinct portion id, same as the one used in the manifest.
- BallotTypeId: the ballot type id, same as the one used in the manifest.
- IsCurrent: set to true, if this element represents the current state of the CVR.
- Contest elements. Lists all contests for the current ballot type.

Contest:
This element represents a marked contest. Contains the following attributes:

- Id: contest identifier, as used in the manifest file.
- Marks: list of marked (explicitly/implicitly) in this contest. Note: explicit marks mean when the voter filled in the voting box directly. Implicit means when the voting box was implied by a straight party ticket selection.

Mark element
Contains the following attributes:

- CandidateId: indicates the candidate the mark is for (if a write-in position is resolved to a qualified write-in the candidate id will point to a qualified write-in).
- PartyId: indicates party affiliation. If not party affiliation then this will be 0.
- Rank: indicates rank; will be 1 by default, will only contain values higher than 1 if ranked choice voting is used.
- WriteinIndex: if mark is for write-in position (or qualified write-in) this attribute indicates which write-in position in the contest (0 means first, 1 means second position, etc.)
- MarkDensity: percentage that voting box was filled.
- WriteinDensity: percentage that write-in area was filled in. Attribute exists only if it is a write-in position.
- IsAmbiguous: a Boolean value indicating whether mark is ambiguous.
- IsVote: a Boolean value indicating whether the mark produced a vote. Note: an implicit selection because of straight party vote would also be set to true. Any mark above the max threshold will be true in a ranked choice voting contest.