Major Voting Equipment Vendors' Ranked Choice Voting Capabilities

A brief guide to RCV-ready voting equipment

EAC Certified:

- Unisyn has a built-in Ranked Choice Voting (RCV) tabulation system: their Open Elect 1.0 was the first system with native RCV capability certified by the EAC (January, 2010). It allows up to three rankings.

- Hart has a built-in RCV tabulation system. Their newest software/system, Verity Voting 2.0, allows voters to rank up to six candidates (up from five in the previous iteration) and was certified by the EAC in April, 2016

RCV Capable with Third Party Tabulation Software

- Dominion has a semi-built-in RCV system. Their Sequoia Optech Insight machines are used in San Francisco and Alameda counties for RCV elections there. It allows voters to rank up to three candidates, and can tabulate RCV elections internally (requiring no cast vote record (CVR) export). Dominion has, in the past, indicated their willingness to modify their systems to enable them to read and tabulate ranked ballots – the cost to include that is negotiated on a case-by-case basis. Dominion has no RCV option that is EAC certified at the time of this report.

- Election Systems and Softer (ES&S) does not have a built-in ranked choice voting system. However, their EVS 5.1.0.0 (not federally certified) and EVS 5.2.0.0 (federally certified) software case capture RCV ballots and export a cast vote record (CVR) that can then be tabulated by third-party software, typically through use of Excel spreadsheets or other spreadsheet/database systems. EVS 5.1.0.0 requires ballots to have an individual column for each potential ranking, listing all candiates at each rank. The total number of rankings under 5.1.0.0 is functionally capped at three, because of ballot space constraints. EVS 5.2.0.0 can use a grid format, and so can allow more rankings (the useful extent of which is not yet known). In addition, RCV elections have been administered with the iVotronic, DS200, M100, and M650. The DS450 and DS850 are also capable of capturing RCV ballots.

- MicroVote does not have a built-in RCV tabulation system. No machines of theirs have been used for RCV elections, so they have no RCV-compatible ballot designs. They are interested in working with our Model RCV Voting Equipment Project (described below) on developing a ranked choice ballot compatible with their current system.

Model RCV Voting System Project

A group of stakeholders, election officials, advocates, and interested invidiauls are working together to offer a Model RCV Voting System. Almost all RCV jurisdictions in the United States are represented; the Center for Civic Design, Clear Ballot, Oxide Design Co. are participating; and four of the top five voting equipment vendors are participating to varying degrees.

Our RCV research team is working on a tabulator that can take captured CVRs from all voting equipment capable of exporting RCV-compatible CVRs and tabulate RCV results from those CVRs. The tabulator software will accommodate between three and six candidate rankings for each race and is planned to be adaptable to as many RCV jurisdictions as possible using legacy voting equipment. Plans are to have this certified by an EAC-approved testing lab, and we intend to offer the tabulator to jurisdictions for free or at very low cost.