ELECTION MARKUP LANGUAGE (EML)

SECURING VOTING SYSTEMS

- Democratic voting methods
- Open standard specifications
- Assurance for voters
- Solutions for election administrators
- Tools for providers

ELECTION STANDARDS SPECIFICATION
Evaluating Your Electronic Voting Choices

As a Voter I Want To Know That

- Everything is accurate and verifiable
- Everything is honest and auditable
- My vote got counted correctly

As an Election Administrator

- I want to show my process to my constituency; increasing confidence in the election process and its results
- I want to be able to control, verify and audit each step of the process
- I want built-in security safeguards and access control
- I want to send my results information to interested 3rd parties (News Agencies, Election Control Board, Political Parties, Independent Analyst Groups, etc.) all using a single secure and standard way

As an Election Manager

- I need to select cost effective and affordable solutions for my organisation
- I must be able to upgrade seamlessly without having to replace my entire investment
- All components need to be part of a thoroughly independently tested and assured solution
- My approach needs open, accountable methods that are publically verifiable

As an Election System Provider

- I want to provide a method for independent 3rd party validation of the complete votes and results reported
- I want built-in safeguards for the integrity of the information
- I want publically available standards with testing systems so I can consistently and easily certify my solutions
- I want to include information from a range of external systems into the final results, in a way that shows they are the originals without alteration
- I want to be able to report results using open public standards that support today’s media and web publishing needs
Using the OASIS EML Standard Provides

1. Verifiable Elections and Referendums
   - Uses open public specifications to promote voter rights and safeguard elections
   - Provides a base on which to build open, trustworthy and credible systems
   - Allows end-to-end implementation of audit and control mechanisms
   - Targets public and private elections and referendums

2. Rigorous Protection for Voter Privacy and Verifiable Balloting
   - Provides formal mechanisms and procedures to ensure voter privacy
   - Supports security of cast ballots to prevent malicious tampering or unintended data loss
   - Allows voters to verify that their ballot choices are recorded correctly
   - Allows for full public disclosure of records that enable election results to be double checked

3. Full Support for both Paper Ballots and Electronic Recording
   - Provides consistent ways to define paper and electronic ballots
   - Enables paper ballots to be optimized for use with computer scanning
   - Provides consistent ways to record candidates and issues to ensure fairness
   - Allows the use of special balloting equipment to promote accessibility

4. Voter Registration and Information Provisioning
   - Provides consistent approach to voter registration;
   - Enables voters to easily locate their polling location
   - Standardizes absentee, overseas and military voter registration
   - Simplifies information sharing with political parties and other accredited organizations

5. End-to-End Election Integrity
   - Specifies standards for the exchange of information throughout the election processes
   - Provides common interfaces that can be tested to ensure accuracy, consistency and verifiability
   - Provides a uniform and reliable way to allow different election systems to interoperate
   - Enables reliable certification and testing with publically accredited test suites

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6. Benefits for Election Officials

- Increases transparency so that the election process can be better managed by election staff
- Enables consistency in the application of election rules and procedures
- Allows greater choice of products and suppliers thus avoiding proprietary lock-in
- Allows customization to meet the needs of different jurisdictions

7. Benefits for Suppliers

- Increases potential market and reduces development costs through standardization
- Provides a common core but allows local customization and extension
- Allows compatible innovations to be marketed without having to replace entire systems
- Support for accessible voting systems, multilingual balloting and kiosk-based voting

8. Support for all types of counting methods

- Supports cumulative, block, supporter list and other election types
- Provides full transparency for results counting at all levels
- Supports the counting of absentee ballots on polling day
- Provides analysts and news media organizations with consistent details about election results

9. Independent confirmation of election results and totals

- Provides for confirmation of the results that vendors’ machines produce
- Enables publication of election results including cast ballots and intermediate tallies
- Provides for system certification involving formal testing suites and independent checking
- Provides an open standard that can be used to verify counts using more than one type of software

10. Approved voting processes and best practices

- Ensures open processes that are vital for healthy democracy
- Provides ways for jurisdictions to improve their procedures to meet latest challenges
- Developed with the flexibility to support democratic process that differ internationally
- Internationally approved and peer reviewed standard

For more information see the “The Case for EML” white paper on the OASIS Election Services Committee website: [http://www.oasis-open.org/committees/election](http://www.oasis-open.org/committees/election)

OASIS (Organisation for the Advancement of Structured Information Standards) is a not-for-profit consortium that drives the development, convergence and adoption of open standards for the global information society. [http://www.oasis-open.org](http://www.oasis-open.org)