



One-time Proxy Voting

Description

Proxy voting is the act of a representative of a person voting on their behalf in their absence. This practice occurs in many legislatures of representative democracies, voting bodies of corporations, as well as in public elections. For purposes of validation and accountability it may be desirable for votes cast by proxy to be signed, so that the holder of the voting right is able to certify what vote was cast on their behalf.

Classical cryptographic signatures can be applied multiple times to different ballots, decreasing their utility. However, quantum one-time programs offer a way to delegate the signing of a vote in such a way that a malicious proxy has a very small probability to successfully sign two different votes. This makes them suitable for scenarios in which a proxy is appointed temporarily.

Quantum advantage

The digital signature can only be applied a single time.