



The Swiss Voting System Freedom of Voting® Standards

Table of Contents

1. Fulfilling the Swiss Voting System Freedom of Voting® Standards.....	2
1.1 General.....	2
1.1.1 What is the benefit of a Certificate?	2
1.1.2 Liberty and Restriction	2
2. The Standards	3
2.1 Voter has Choice of the Voting Method	3
2.2 Secrecy and Security	4
2.2.1 Secrecy	4
2.2.2 Security by decentralization	5
2.2.3 Security of the data transmission.....	5
2.3 The Right of Information.....	6



Rights of Using the "Swiss Voting System Freedom of Voting®"

The Trademark "Swiss Voting System Freedom of Voting®" is the property of the company Swiss Voting System A Privately Held Company AG CH 4053 Basel Switzerland. (Short form "SwissVS") Please consult the company Swiss Voting System A Privately held Company AG or one its representatives for the use of the brand and the logo's Swiss Voting System Freedom of Voting®.



1. Fulfilling the Swiss Voting System Freedom of Voting® Standards

1.1 General

Elections are the basis of any democracy. Without confidence in the election and voting process, no voter will feel correctly represented and will hardly accept any decisions produced by the political system. For that reason, correct elections are of fundamental importance.

Although it is clear that the quality of a democracy also depends on factors such as the socio-economical structure, the media and others, this report solely focuses on the freedom of voting.

Swiss Voting System (SwissVS) provides information and guidelines on voting processes through reports and consultation services. Furthermore, if the standards as defined in the Swiss Voting System report are fulfilled, the label of Swiss Voting System may be displayed in the respective polling stations. The label guarantees that voting takes place in accordance with SwissVS standards, and in accordance with the notions of democracy, transparency and traceability.

1.1.1 What is the benefit of a Certificate?

Democracy does not equal free will! Although most countries today claim to be democratic, it is obvious that different standards are applied in different countries. However, all voters have the right to be correctly represented. To ensure this right, Swiss Voting System Freedom of Voting® defines and promotes a number of simple and comprehensible standards. SwissVS also supports public authorities in achieving these standards. If a polling station correctly applies these standards and guidelines, it obtains a SwissVS certificate, which is an effective communication tool to the voters.

1.1.2 Liberty and Restriction

The ideas of liberty and democracy can be interpreted in many different ways. What is true regardless of interpretation is that no one is absolutely free. One must always follow some laws and rules. However liberty does not need any restriction when the liberty of one person does not infringe upon the liberty of another person. The rules defined and promoted by Swiss Voting System Freedom of Voting® do not infringe on anyone's liberty and can therefore be fundamental elements of all democracies.

The three fundamental rules of the Swiss Voting System Freedom of Voting® are:

- Voter has Choice of the Voting Method
- Secrecy and Security
- Right to Information



2. The Standards

The



**Swiss Voting System™
Freedom of Voting**

Standards

2.1 Voter has Choice of the Voting Method

The first rule of the Swiss Voting System Freedom of Voting® concerns the choice of the voting method.

Over time different methods and technology for voting have been developed. At first the voters gathered at one place and voted by raising their hands. Even today, this system is still applied in some small communities in Switzerland. Due to the obvious disadvantages (limited number of people who can meet at the same place, no confidentiality), other modes have been introduced. The paper ballot, which is cast at polling stations is probably the most applied technique throughout the world. In Central Europe however, voting by mail has become more and more popular. Electronic voting systems, be they internet based or organized at polling stations, are already available in some places.

The first rule of the Swiss Voting System Freedom of Voting® therefore, shall include the possibility of casting the vote at a polling station or to sending it in by mail.

If a voter decides to vote in person, he shall have the choice of voting with the paper ballots he has received or if possible of voting electronically. Assuming that the ballots are clearly designed, the comprehensibility of the voting process with paper ballots is self-evident. The design and control of electronic voting machines also need special care.

The free choice of the voting method of any given voter does not infringe upon the wishes of any other person and should therefore be a fundamental right of all voters.



2.2 Secrecy and Security

The second standard of the Swiss Voting System Freedom of Voting® concerns the secrecy and security of the voting system.

2.2.1 Secrecy

Secrecy means, that there cannot be established any connection between the vote and the voter once the vote has been cast. This can be ensured in different ways:

- by separating the voter registration card from the ballots, if the voter votes by mail
- by separating the ballots from the voter registration card if the voter casts his ballots at the polling station.
- in the case of the votes being cast by using a voting machine, special care needs to be dedicated to the risks of hacking and other technical issues.

Secrecy also means that it is not possible to establish voter profiles based on the cast ballots. The only way voter profiling can be prevented is by separating the different issues on different ballots. Throughout the United States however, a single ballot sheet is used and easily enables the profiling of voters.

A system of separate ballots also considerably facilitates the counting process. The collected ballots are separated and piled in different stacks which can be easily counted by hand or with a money counting machine.

Switching from a single ballot system to a system with separate ballots may at first trigger some voter confusion. For that reason, it is important that the election authorities inform the voters thoroughly and make the changes and the reasons for having them transparent. Due to the separate ballot system, the results of elections in Switzerland can be communicated within a few hours after polling stations close. This is possible even though only a small number of personnel are deployed and the use of machines is limited.

In the case of e-voting, the authorities shall disclose the source codes of all software involved in order to make this procedure transparent. Of course e-voting systems need to be designed in such a way that voter profiling is not possible, and that secrecy is guaranteed.



2.2.2 Security by decentralization

Security means that the voting process cannot be infringed by fraud, in particular not by fraud of the election authorities.

First of all, security can be achieved by decentralization. In a decentralized voting system, a major fraud, which would have a considerable impact on the end result, would require a conspiracy of a relatively large number of polling officers. A fraud, executed by a single person, would not have any considerable impact.

To obtain the Swiss Voting System Freedom of Voting® certificate, any single counting station shall not cover more than 2% of the total number of voters. The same ratio also applies to electronic systems. Electronic systems shall not be integrated into networks which cover more than 2% of the voters.

By respecting the ratio of 2%, the transparency and traceability is most effectively guaranteed. By following the third rule of the Swiss Voting System Freedom of Voting® concerning the right for information, the correct application of the 2% rule can be easily monitored.

2.2.3 Security of the data transmission

To ensure the security of the transmission of the voting results, at least two different means of communication shall be used. Possible means are: Telephone, Fax, E-mail, Internet It is important that the results of any polling station can be monitored and controlled by the Central Election Authority.



2.3 The Right of Information

The third rule of the Swiss Voting System Freedom of Voting® concerns the right of information. In a democratic system, it is important that election results are published.

For attaining the Swiss Voting System Freedom of Voting® certificate, it is necessary to publish the results for the smallest units possible, e.g.:

- per polling station
- per polling station, which receives votes by mail
- per decentralized server, in cases of electronic voting

This right of information also ensures the highest transparency and therefore traceability for every voter.

The information should not only be published by electronic mediums, such as internet, radio, or TV, but also in the local print media. The basic idea is that every voter is able to sum up the results from the different polling stations and by doing so verify for himself the final result.

"A voting result is much more reliable if everybody can add up the results from 200,000 polling stations than only from 51 States."

