# Interactive Tools for e-Democracy: Examples from Switzerland

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**Abstract.** Democracy is based on freedom of voting but also on meaningful discussions about matters that are put to the vote or about people who wish to be elected. E-democracy cannot therefore be reduced to e-voting. It should also include Internet-based services that facilitate online interaction between voters, candidates and supporters of various opinions. This paper presents a series of interactive tools that can be used to support such a virtual dialogue. A matrix is proposed to categorize these tools. Examples of such tools used in Switzerland are given. The most sophisticated tools and websites recently developed for Swiss elections or referendums are described in some detail. Possible future research on the impact of these tools is outlined.

## 1 Introduction

Many lay discussions and scientific papers about e-democracy have concentrated on the various forms of e-voting, and in particular, remote e-voting i.e. an Internet-based form of voting by using a computer that is not under the physical control of election officials (Alvarez & Hall 2004). In fact, e-voting is only one of the three steps in the electronically supported democratic process. There is a post-voting step in which results can be quickly published and discussed on the Internet, and there should be a pre-voting step whereby citizens can find information on the Web about the issues and candidates on which they are called upon to vote, electronically or otherwise. This paper concentrates on the pre-voting phase (Kies & Kriesi 2004) and its recent Internet developments in Switzerland, a country where many matters are put to the vote four times a year at all three levels of government (so-called direct democracy), in addition to regular or exceptional elections of executive and legislative bodies. Switzerland is also one of the few countries where e-voting experiments have been actively pursued by the Federal government and some cantons (Chancellerie fédérale 2004).

Within this pre-voting phase, it is possible to distinguish two stages (Figure 1) if we consider e-democracy as a subcategory of e-government and if we refer to the traditional three-stage model of e-government: publication, interaction, transaction (see for example Dempsey, 2003). The transaction stage corresponds to e-voting

itself, which involves the same technical difficulties as other online services requiring high security (identification, authentication, etc). The publication stage consists of the Web posting of data, information and documents about matters submitted to voting. It also includes the publication of detailed results after (e-)voting (the post-voting step mentioned above). The interaction stage consists of all possible Internet-mediated communications between the citizen who will eventually vote and those publishing information about voting matters. Research has been carried out on this stage (sometime referred as e-engagement or e-participation) especially in the United Kingdom (e.g. Kearns et al. 2002).
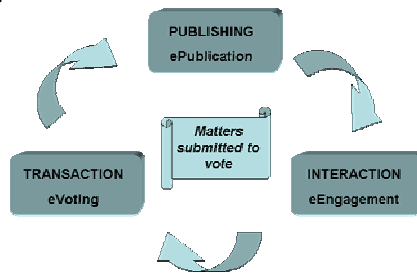


Figure 1 – Three stages of e-democracy

The potential of online communication and interaction for changing offline politics has been recognized by several authors (e.g. Rushkoff 2003, Gibson et al 2004, Jeitziner 2004). This paper will present an overview of the voting assistance tools phenomenon, and will attempt to categorize these tools according to their sophistication and type of authors / publishers.

The paper is organized as follows: Section 2 presents the three main political actors who can offer voting assistance tools for an interaction with the citizen on electoral matters (2.1). It outlines the various Internet-based tools and techniques available for such a purpose (2.2). A matrix is proposed to categorize these tools, and presents examples of voting assistance tools recently used in Switzerland (2.3). Section 3 describes, in some detail, the most sophisticated tools offered on non-volatile Swiss websites from different types of actors. In the conclusion, the possible effects of these tools are outlined and further research is proposed.

## 2   Voting assistance tool functionalities and actors

We first describe the political actors able to provide these tools on their websites and then the Internet-based functionalities that can be put to use.

### 2.1 Actors

It is necessary to distinguish three main political actors: governments, advocates and third parties.

**Governments**. The executive and legislative bodies (and the judicial sphere in some countries where judges are elected) are obviously involved in electoral and voting matters. They can present their views on these matters in an interactive way in order to supplement the purely informative approach used by most of them today on their official websites. All levels can be involved: local, regional, national and even international as some e-votes have been organized at world level by international organizations such as ICANN (Internet Corporation for Assigned Names and Numbers) (Ahlert 2003). Governments can only take an (online) official position (e.g. in a referendum) or no position at all (e.g. in a parliamentary election), but this position can lend to some interaction with the citizens.

**Advocates**. This category of actors includes all those who take a clear stand for or against a matter that is put to vote or a person who is seeking to be elected. It includes candidates for election, (already) elected officials, political parties, factions, action committees for or against a particular vote, unions, NGOs, etc. Some of these persons or organizations have permanent websites; others have a web presence that is limited to the period prior to the vote and that disappears shortly afterwards, making it more difficult to study. Easy access to the Internet has allowed previously obscure advocates or opponents to convey their views to wider audiences in ways that are at times highly innovative and interactive.

**Third Parties**. In this category of actors, we place all the observers, commentators and researchers who provide websites dealing totally or partially with matters put to votes or candidates seeking to be elected. Third parties include online media, regular media with websites, independent organizations and individuals, many of them political scholars who conduct experiments and surveys. Most of the time, third parties have a neutral position concerning the vote, although they can sometimes indicate a preference (in particular the media, via editorials). The third parties' websites are often volatile, since many are only experimental or do not have an archive section.


## 2.2 Functionalities

Because interaction can be considered as a continuum between information and transaction, it is possible to list the voting assistance tool functionalities from the least to the most interactive ones, i.e. from games to simulations.

**Games** are proposed to citizens to complement a purely informative website and to offer them an entertaining way of discovering facts about a matter to be voted on or the voting process itself. Sometimes, they take the form of an e-learning tool. The interaction is built into the tool and the netizen has little leeway except to choose between predefined options by clicking on some buttons or boxes. The tool returns some kind of predefined "answer". An example is the quiz that was proposed by the European Union and partners for the European Parliament elections of 2004 (www.europaquiz.org).

**E-mail** is an obvious way of providing citizens with the means to interact with governments, advocates or third parties. Most of these political actors' websites do provide one or more e-mail addresses to send a personal question or comment, although a response is never guaranteed. Sometimes this form of interaction simply

serves to build a data base of constituents' e-mails. Bill Clinton, as President of the United States, is arguably the first head of State to have interacted with his electors through e-mail (president@whitehouse.gov). It is said that a large staff at the White House was recruited to answer his e-mails in a personalized way. Recently, the European Commission upgraded its "Dialogue with Citizens" service. Users can now obtain personalized help in any of the 20 official languages by e-mailing services such as "Europe Direct" and "Citizens Signpost service" (IDA 2004).

**Forums and Web "blogs"** go a step further than e-mails. The questions or comments sent by citizens can be seen by all those who consult the website hosting a particular forum. These users can in turn post their own answers and remarks. Political and also other forums have been known to attract unsuitable comments (racist, sexual, etc.) and must usually be moderated if the website owner does not want to be held responsible. Forums can be organised by topics structuring the debate about political issues put to vote, and are thus a form of (asynchronous) dialogue between citizens. The Suffolk Online Project, within the British Wired up Communities pilot projects, is a well known example of how a forum can be organized for democratic discussions of political issues (Hansard Society 2002). Web logs or "blogs" (online journals) are a more recent form of interaction. During the American elections of November 2004, the phenomenon of blogs rose to become one of the major opinion making factors. Both presidential candidates had their own official blogs and many unofficial ones (www. watchblog.com). The fact that many moderators of these blogs at times obtained the same status as journalists shows the impact of this upcoming information channel.

**Chats** are basically synchronous forums. They have been used more rarely than forums for voting matters, for example in Sweden (Rosen 2001). They provide a higher level of interaction although a very ephemeral one. A moderator is almost indispensable. In 2002, Telecom Austria invited politicians for a "special Election 2002" chat on its website (Pressetext Schweiz 2002). A current example is the website of the European Union (www.europa.eu.int/comm/chat/index_en.htm) which offers a server for chatting in 11 languages of the European Union and proposes transcripts of previous chats. SMSs can also be considered as a type of chat; they have been used by parties to urgently call back their members for a parliamentary vote, and by radio and TV shows to let their audience interact with a live political debate.

**Polls** about issues to be voted on can be a very effective form of interaction if their results are continuously provided online, meaning that the netizen can see the influence of his/her vote. They require the completion of an online form with at least one question, but often have several. Such polls by questionnaire have no scientific validity, as they are usually not based on a representative panel of citizens who can vote. They have been known to be prone to "hijacking" by advocates. The Webocrat system developed within the EC-funded 5th Framework Programme includes polling and forum functionalities (www.webocrat.org). Polls can sometimes take the form of rating devices for elected officials, or markets for pending elections. The Iowa Electronic Markets are a sophisticated example of this peculiar type of polls (www.biz.uiowa.edu/iem).

**Simulation** tools are so far the most sophisticated form of interaction that can be provided on the Internet for citizens who wish to see the effect of their vote on their

own particular situation (on fiscal matters for example). They sometimes try to match voters' political opinions with candidates' positions. Simulation tools allow for innovative ways of selecting candidates, because they provide the possibility of scanning candidates and parties more systematically and choosing those that are the closest to the voter's own political preferences, beyond party affiliation or single issue position. A precursor of this type of tool was in 1998: the "Stemwijzer" in the Netherlands (www.votingindicator.net). This functionality has also been experimented with in other countries such as Austria (www.wahlkabine.at), Germany (www.wahl.o-mat.de), Sweden (Aidemak 2003) and the USA (www.vote-smart.org).

## 2.3 Actor-Functionality Matrix

An actor-functionality matrix can help clarify the already crowded field of voting assistance tools. It is filled with Swiss examples (table 1), some of which are briefly described below. The examples marked in bold are discussed in section 3.

Table 1 – Examples of Swiss interactive political websites (Autumn 2004)

|  | *Governments* | *Advocates* | *Third parties* |
|---|---|---|---|
| **Games** | **www.parlament.ch (>CiviCampus)** | www.postfueralle.ch | www.lacourseauconseilfederal.com |
| **E-mail** | **www.parlament.ch** www.calmy-rey.admin.ch | **www.prd.ch** www.gruene.ch www.olivierfeller.ch www.zisyadis.ch | www.infrarouge.tsr.ch www.rsr.ch (>Programmes >Forums) |
| **Forums & Blogs** | **www.parlament.ch** | **www.radical.ch/forum** www.rene-vaudroz.ch www.postfueralle.ch | www.infrarouge.tsr.ch forum.swissinfo.org/swiss-abroad www.fimm.ch www.freegoat.org |
| **Chats** | www.edi.admin.ch (with Swiss President) | www.fdp-live.ch | |
| **Polls** | | www.blocher.ch **www.prd.ch** www.pssuisse.ch | www.24heures.ch/home/agora www.swisspolitics.org **www.politarena.ch** www.wahlen.ch |
| **Simula-tion** | www.calcul-impot.ch | www.avs-oui.ch www.non-au-paquet-fiscal.ch | www.candidats.ch **www.smartvote.ch** **www.parlarating.ch** www.comparis.ch |

In the **games** category, a good example is the website of those in favour of the Swiss post initiative (www.postfueralle.ch) which proposed a Pac-Man type of game in which the player had to "eat" positive votes without being captured by the ghosts (Figure 2). The end score shows how many votes the player obtained. Although the game is not directly trying to convince the player to vote in favour of the initiative, the netizen might remember having enjoyed it, and at the end of the day, this may influence his or her voting behaviour. Another example of the game category is the politician's puzzle offered on www.swisspolitics.org (Figure 2).

Figure 2 – "Pac-Man": www.postfueralle.ch and « Puzzle »: www.swisspolitics.org

Another noteworthy website that can be classified under the games category was created for the election of the Federal Council (Swiss Government) on 10 December 2003 (see Figure 3). This game permitted netizens to "vote" for Federal ministers, although in reality, only members of Parliament can vote. The principle was similar to a stock exchange; each candidate for the Federal Council represented a company with shares. The share quotation was based on factors such as popularity surveys or number of public debates. Netizens could buy or sell shares with virtual money by following their "broker instinct" (cf. www.lacourseauconseilfederal.com [the race for the Federal Government]).



Figure 3 – www.lecourseauconseilfederal.com

At least one **e-mail** address is present on most Swiss political websites to provide the netizen with some opportunity for communication. Whether mail sent to these addresses is answered is another matter. A quick survey of the websites of the candidates for the Federal elections in October 2003 has shown that most of them do not answer, or only do so after a long delay (Seydtaghia 2004). Almost all members of the Federal parliament have a published e-mail address (often in the form: firstname.surname@parl.ch) and about 30% have a website (Chappelet 2004). This is also the case for the 7 members of the Federal Council. E-mail is also used more and more by the media to let the audience directly interact in talk shows, and in addition to the telephone. The Infrarouge@tsr.ch (television) or Forums@rsr.ch (radio) addresses are two examples among many others.

**Forums and "blogs"** are another asynchronous way of exchanging and communicating on voting matters. Forums have been initiated, with limited success, by the Swiss Parliament (NZZ 2002) or by regional governments (e.g. the Canton of Vaud which was forced to close its forum in 1998 following racist comments). This functionality is much more widely featured on the websites of advocates or third parties.

Nearly all the Swiss parties and initiative committees have a permanent forum on their website. The forums set up by initiative committees only exist during the few months preceding the vote (e.g. www.postfueralle.ch for the maintenance of post offices in all communes, or www.oeuvres-sociales-sures.ch against improved maternity insurance). Some politicians have their own forums (e.g. MP Vaudoz's forum in Figure 4). Radio and television websites usually feature forums related to their political debates or talk-shows (e.g. Infrarouge.tsr.ch). There are also websites powered by media companies (e.g. forum.swissinfo.org/swissabroad). Concerning "blogs", the discussions generated by this type of communication is usually more fragmented than in forums and the sense of community between netizens and public officials is seldom existent (cf. www.freegoat.org).



Figure 4 – An MP's forum at www.rene-vaudroz.ch

**Chats** provide synchronous interaction between netizens, but are rarely used in Swiss political debates. One of the first experiences of this functionality in Switzerland was a one-hour chat with the President of the Swiss Confederation in 1999. For 60 minutes, President Ruth Dreifuss had the opportunity to answer more than 300 questions from citizens (NZZ 1999). On 23 June 2001, the Liberal Democratic Party (FDP) organized its first "e-Party Day". During that day, an *ad hoc* website proposed forums and chats with FDP politicians (NZZ 2001). Radio and television rarely use chats because they could compete with their own live talk shows.

**Polls** are often used in political websites with the exception of those initiated by governments, which must refrain from influencing final results with intermediate predictions. One of the first Swiss politicians to introduce a poll on his website was Christoph Blocher, who is now a member of the Federal Government (www.blocher.ch). It consisted of a simple monthly question to be answered by yes or no. The permanent online outcome was shown by using a thumb pointed either up or down. Political parties also use online polls to evaluate the trends of public opinion. Newspapers often propose sophisticated polls with several questions on their homepage. The Lausanne-based daily "24 heures" used weekly polls to address local questions. In April 2004, it launched an online poll about the reintroduction of marks in Cantonal schools, a hot political topic at the time and the subject of a Cantonal initiative. Those in favour of not reintroducing marks voted heavily in this poll and biased its outcome. After this experience, the daily decided to stop its political polls (Moginier 2004). Another interesting interactive tool is www.wahlen.ch, which polls many pending national voting items and shows the current results online. This third party website even proposes contests to guess the result of real votes (e.g. which party will win the Cantonal elections in Basel in October 2004?).

**Simulations** have been used on Swiss websites since 1999 to compare insurance and banking services (www.comparis.ch is the most well known of these sites). Such a functionality has now been introduced for political matters. Comparis.ch used its simulation engine to help voters compute the rent they would pay if a new law was accepted by popular vote in February 2004. (It was refused.) For the May 2004 votes, a website was created in support of a change to the Swiss pension system (www.avs-oui.ch). Citizens had the opportunity to simulate their pension at retirement age, with or without the proposed modifications to the system. (The change was refused.)

Simulation tools are rarely created by governments. A rare example is the website provided to calculate one's income tax if a 2003 proposal by the Swiss government was accepted. The netizen had to introduce different variables such as income, number of children and marital status (Figure 5). Within seconds, the screen displayed the tax to be paid with the existing and proposed systems.



Figure 5 – www.calcul-impot.ch

## 3  Analysis of some Swiss websites with voting assistance tools

We shall now describe some of the permanent Swiss websites that feature several voting assistance tools and that are published by different types of political actors.

### 3.1 Parlament.ch

The portal of the Swiss Parliament (two legislative chambers) aims at providing both MPs and citizens with information about the Federal legislative process. Its main interactive functionalities are: game, e-mail and forum.

The **game** category is represented by an e-learning application entitled "CiviCampus". Switzerland being a direct democracy, its citizens not only elect the Parliament, but also vote on matters such as amendments to the constitution, initiatives (proposals

for a new legal feature) or referendums (against a law voted by Parliament). Civi-Campus is a simple and fast way to refresh knowledge or to learn about the basic political rights of a Swiss citizen, and is available in French, German and Italian (Figure 6).
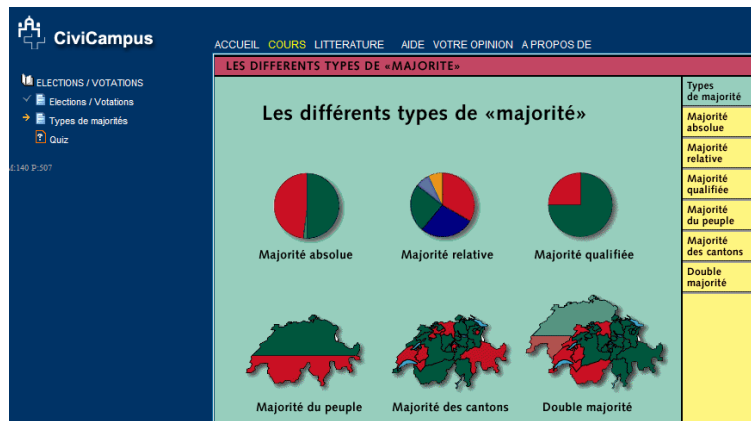


Figure 6 – www.parlament.ch ("CiviCampus")

The **e-mail** addresses of all MPs are provided in alphabetical or Cantonal order. These addresses are also accessible directly by clicking on the MP's name when it appears in the Official Bulletin of the Parliament which records (in text, voice and video form) all the speeches held in the two chambers. This feature of the Official Bulletin invites interaction between MPs and citizens, who can voice their opinions after having read or heard an MP's comments. But it is not well known.

The first **forum** offered on the Swiss Parliament website (about the adhesion of Switzerland to the UN) was a resounding success. Over 300 contributions were posted, many addressed to or written by elected officials. The following forum (on abortion) was rather disappointing, with no more than 50 contributions. For the Parliament website, forums are an interesting form of communication, although not an entirely suitable one. The reason for this is simple: most Swiss MPs are not full time politicians, and hardly have time to answer all the comments received. The idea of continuing with forums on the Parliament website for important debates in the future is however being considered (Schaffner 2002).

## 3.2 Prd.ch

The website of the Liberal Democratic Party (LDP) aims at providing both members of the LDP and other citizens with all the information required for the political process, based on the point of view of this centre right party. Its main interactive functionalities are e-mail, forum and poll.

The LDP party can be contacted by **e-mail**, as can most of its cantonal sections and (elected) personnel through the website, which serves as an electronic directory.

The **forums** indirectly offered by the LDP national website are fragmented over the party's various Cantonal websites. The advantage of this fragmentation is that the

local politicians can discuss locally relevant problems with the local netizens. These forums are organized by current political subjects, and moderators supervise the debates to avoid inappropriate comments.

The **poll** featured on the LDP website is a first in Switzerland. It allows global consultation of LDP members in order to define the future of the party (www.f.avenir-radical.ch). The consultation procedure was addressed primarily to the members of the party, but sympathizers or any other interested parties could participate. In two months, (21 June to 21 August 2004) two thousand people did so. 90% of those responding gave their opinion via the website. By the end of the poll, the party received more than 5,000 comments. The participants were given the possibility to appreciate the various party projects according to a scale ranging from 0 to 5 on the one hand and based on three criteria (important – right – liberal) on the other. The final results were presented at the party's national assembly and will be integrated in its vision statement.

### 3.3 Smartvote.ch

This website aims to provide citizens with all the information required to make an appropriate electoral choice. It has two main functions: the smartvote choice assistance tool itself (which is a simulation) and the myvote online choice tool (a poll).

Smartvote was the first national-scale system to give Swiss citizens the opportunity of comparing via the Internet their opinions with those of most candidates for the 2003 Federal elections. For Andreas Ladner, a political scientist, this system allows an individualisation of the vote and reduces the importance of the parties in the composition of electoral lists. In future, it could revolutionize election campaigns and the selection of the elected officials (Petignat 2003).
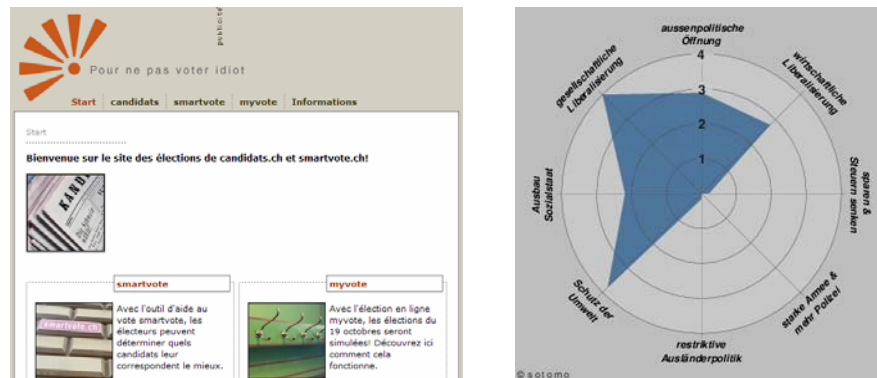


Figure 7 – www.smartvote.ch (Homepage and "smartspider")

Smartvote.ch has been online since 1 August 2003, and is also accessible through candidats.ch and myvote.ch. It allows the netizen to give his/her opinion on a number of political subjects, and in particular the fields of education, safety, health, environment or economy. The user can choose between the full version, which consists of 70

questions and takes about fifteen minutes to fill in, and a lighter version (24 questions, less than 5 minutes). The candidates for the Federal elections were asked to fill in the complete questionnaire and had to answer additional questions to reveal possible areas where their position differed from that of their party. After having filled in their questionnaires, netizens can then visualize, for each Canton and each chamber, a list of those candidates sharing more or less the same political views. A graph similar to a cobweb, named "smartspider", indicates exactly those domains for which the netizen and the candidate share opinions (figure 7).

The myvote displays the results of National Council and Council of States elections based on the netizen's online vote. The bank of candidates included almost all 3,000 candidates for both chambers in the 2003 elections.

Smartvote.ch has been generally praised as being a way of regenerating some debate. A few observers, however, have criticized it as an ersatz for real political debate, a little in the same way as the TV show "Loft Story" faked real life interactions (e.g. Zendali 2003).

## 4  Conclusion

The aim of this paper was to describe an emerging phenomenon in Switzerland, a country that prides itself on its direct democracy – a system that implies voting at least four times a year. It has provided an overview of the field of interactive tools for enhancing electoral choice and presented the most sophisticated tools, in particular those used in the Swiss Federal election year of 2003 and in 2004. The influence of such tools on voters' behavior and choice remains largely unknown. Do they increase citizens' participation? Do they incite them to vote, whether electronically or not? Do these tools make citizens decide differently from what their party affiliation would suggest? What are the consequences for the candidates and political parties? Have the quality of the opinion-forming process and the level of information among the electorate improved? Do such tools make politics more visible and thus lead to a new type of democracy wherein live discussions would be replaced by forms of virtual interaction?

It is also necessary to ensure that the interactive e-participation tools, and in particular online polls, strengthen rather than undermine the representative nature of modern democracy and do not replace this by a "government by referendums", even in Switzerland where "direct democracy" is sacred.

Empirically founded research is needed to explore all these issues, and to assess whether interactive tools constitute an opportunity or a threat for democracy as we know it. A first step would be to create an online observatory for such tools. However, as in the case of e-voting itself (e.g. Norris 2003), caution must certainly be taken regarding the great expectations which are placed by some authors on the phenomenon of voting assistance tools (e.g. Rushkoff 2003).

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