The European Standards Applicable to Innovative Services in Electoral Processes

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1. INNOVATIVE SERVICES IN ELECTORAL PROCESSES

The term “innovative services” in electoral processes as employed in this conference refers to electronically-backed services. Innovative is used to characterize high tech. Electronically-backed solutions are already used in many processes during an electoral cycle, from voter registration, to voter identification, party and candidate registration, voting, counting, tabulation and transmission of results, publication of results, etc.

There are many electronically-backed solutions available, even for the same process. They must comply with legal and organisational rules, which vary from place to place. Their underlying technology also may be different. Innovative services are furthermore characterized by frequent upgrades, namely for security reasons and the need to adapt to rapidly evolving threats.

Democratic elections are one of the cornerstones of a democratic State. So the electoral processes and the solutions that implement them must be trustworthy and trusted. Trust implies that one can understand and control that the solution in question respects and implements the applicable legal requirements. Processes which are crucial to the outcome of the election, such as voting, require greater transparency and trust.

An electronically-backed solution is based on logical abstractions (algorithms). It can be understood and controlled only by a handful of specialists and certainly not by the layman. Especially when introduced in a crucial process, like voting, high-tech is a challenge. The Electoral Management Body (EMB), the regulator or the judge, among others, need to find new, appropriate ways to consider compliance with legal requirements of electronically-backed solutions as high-tech cannot be examined with the same evaluation grid used for paper-based solutions.

European standards on elections developed by the Council of Europe and Venice Commission provide guidance to the countries on the following questions: what legal principles apply to innovative solutions? How do they translate into detailed instructions that should guide the introduction of high-tech solutions? Furthermore, the Council of Europe offers a forum to EMBs to discuss ongoing experiences, legislation and policies in this field.

The following chapters present an overview of the European standards applicable to elections in general and to e-voting in particular. E-voting may be the most challenging innovative service offered in elections. It is also the one on which the Council of Europe has adopted soft law documents: a Recommendation and Guidelines (both updated recently) and has created a forum (biannual meetings) which allows EMBs to have regular discussions and exchanges on this topic.

2. REGIONAL STANDARDS

2.1 Overview

There is quite an important body of international instruments applicable to elections. It includes hard law (treaties and conventions if ratified by the country in question), soft law (declarations, recommendations, codes of good practice, etc) and political commitments (such as the OSCE 1990 Copenhagen Document).  

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Universal treaties and provisions applicable to elections include article 25 of the UN International Covenant on Civil and Political Rights (1966) (and related comments)\(^2\) and a number of other Conventions which contain provisions on the voting rights of different groups.\(^3\) Treaty standards are completed by non-treaty standards expressed in Declarations, Resolutions, etc.\(^4\) Principles in these documents are defined broadly. They are taken up and further developed in regional and national instruments. We will focus on standards elaborated in the Council of Europe region, composed of 47 European states (incl. all European Union members).

An important specificity is the existence of a regional Court, the European Court of Human Rights (ECtHR) which rules on alleged violations of the rights set out in the European Convention on Human Rights (ECHR), including on voting rights. The Convention (ECHR) is an international treaty under which the member States of the Council of Europe promise to secure fundamental civil and political rights. The Court has thus the power to control the implementation of conventional rights by member states and to sanction infringements.

Electoral treaty standards in the region include the right to free elections as foreseen by article 3 of Protocol 1 (P1-3) to ECHR as well as other conventional rights such as freedom of thought, expression and assembly and the prohibition of discrimination (articles 9 to 11, 14 ECHR and P12-1 to ECHR). With respect to the use of electronically backed solutions, additional instruments may be of interest, including those on data protection, e-government etc.\(^5\)

To be noted, the interpretation of the principles by the Court has the same relevance as treaty standards. Now, when discussing the ECHR principles, the Court regularly refers to soft law, i.e. to a number of documents (opinions, reports, codes of good practice, checklists, etc.) developed for instance by the European Commission for Democracy through Law (Venice Commission) – the Council of Europe’s advisory body on constitutional and electoral matters. Venice Commission documents on elections, referendums and political parties identify and promote values which are common to the region – also known as the principles of the Euro-

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\(^4\) See with this respect chapter 3.4 of the European Union compendium (footnote 1)

\(^5\) The preamble of the Council of Europe Recommendation on e-voting (see below) mentions a number of universal and regional instruments (hard and soft law) relevant to e-voting. These include the Convention on Cybercrime (ETS No. 185); the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data (ETS No. 108); the Additional Protocol to the Convention for the Protection of Individuals with Regard to Automated Processing of Personal Data regarding supervisory authorities and transborder data flows (ETS No.181); the Convention on the Standards of Democratic Elections, Electoral Rights and Freedoms in the Member States of the Commonwealth of Independent States (CDL-EL(2006)031rev); the Recommendation No. R (99) 5 of the Committee of Ministers to member States on the protection of privacy on the Internet; the Recommendation Rec(2004)15 of the Committee of Ministers to member States on electronic governance; Recommendation CM/Rec(2009)1 of the Committee of Ministers to member States on electronic democracy; the document of the Copenhagen Meeting of the Conference on the Human Dimension of the OSCE; the Charter of Fundamental Rights of the European Union; the Code of Good Practice in Electoral Matters, adopted by the Council for democratic elections of the Council of Europe and the European Commission for Democracy through Law and supported by the Parliamentary Assembly, the Congress of Local and Regional Authorities and the Committee of Ministers of the Council of Europe.
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European electoral heritage and part of the constitutional heritage. Through this mechanism, elements of soft law may become mandatory (ECtHR decisions are binding for the States).

2.2 Soft law on elections


These two important documents have been completed by others: the “Interpretative Declaration on the Stability of the electoral Law”, the “Declaration on Women’s Participation in Elections”, a “Study on electoral law and national minorities”, the “Report on electoral rules and affirmative action for national minorities’ participation in decision-making process in European countries”, the “Report on electoral law and electoral administration in Europe – Synthesis study on recurrent challenges and problematic issues”, the “Report on electoral systems – Overview of available solutions and selection criteria”, or “Referendums in Europe – an analysis of the legal rules in European states”.

The principles included in the Code are considered to be part of the European Electoral Heritage and the Code serves as a benchmark to countries when amending or evaluating legal provisions on elections.

Another Venice Commission soft law instrument particularly important when introducing electronically-backed solutions is the 2016 “Rule of Law Checklist”. It offers guidance on the application of requirements such as legality or separation of powers, legal certainty, etc. Their respect in an e-voting context is challenging.7

2.3 Soft law on e-voting

The Council of Europe and Venice Commission have elaborated soft law instruments specific to e-voting. In 2004 the Committee of Ministers of the Council of Europe approved Recommendation Rec(2004)11 on legal, operational and technical standards for e-voting, whose aim is to translate the commonly shared electoral principles into detailed standards for e-voting.9 The Committee of Ministers also took note of the Explanatory memorandum to the Recommendation. In 2010, two Guidelines were elaborated which clarify the requirements on certification and transparency, briefly dealt with in the Recommendation.10 All three documents were updated in 2016 and are expected to be approved by the Committee of Ministers during spring 2017.

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8 <https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805dabe8> last checked 22.02.2017

9 Rec(2004)11 was influenced by nascent national legislation on internet voting. In particular the 2002 Swiss federal ordinance (chapter on e-voting) was an important source of inspiration to the Recommendation.

The adoption of Rec(2004)11 was preceded by a Venice Commission report on the compatibility of remote voting and electronic voting with the standards of the Council of Europe. The report concluded that e-voting’s acceptability depends on the legal, operational and technical standards implemented in the procedure. The content of such requirements is of primary importance.

The OSCE/ODIHR, the election-monitoring organisation in the region, has assessed the use of new voting technologies in elections in different countries. Its reports provide valuable information on the implementation of Rec(2004)11 which serves as the legal benchmark together with national legal frameworks for e-voting. In 2013 ODIHR published a Handbook for the observation of new voting technologies which includes a collection of detailed recommendations to countries that envisage introducing e-voting. The legal reference for such recommendations are Rec(2004)11 and the two Guidelines on certification and on transparency of the Council of Europe.

2.4 Why are regional standards important?

When dealing with electronically backed solutions in elections, stakeholders (including the legislator, the EMB, observers, judges, etc.) face new questions and look for benchmarks. The Council of Europe Recommendation on e-voting remains so far the unique international reference in the regulatory field of electronically backed solutions used in elections. Countries as distant as Venezuela and Estonia, Norway and Argentina have used Rec(2004)11 as a legal benchmark when considering the introduction of e-voting or when assessing its implementation.

Organisations like OSCE/ODIHR also refer to it as the legal benchmark for their conclusions and recommendations in this field. And, as already mentioned, soft law provisions may become mandatory for Council of Europe countries if the ECtHR considers them as representing common regional consensus on the interpretation of the principles.

With respect to soft law on e-voting, Rec(2004)11 has had a direct impact on several countries. In Norway for instance it was included (with a few exceptions) in the national legislation and thus given the status of legal basis regulating internet voting trials. Elsewhere, it has been referred to when introducing regulations for e-voting or when interpreting hard law principles in an e-voting context. This was the case for instance in Estonia where the constitutional judge referred to it when deciding whether the internet voting solution respects the principles of equality. Countries refer to the Recommendation when discussing the possible introduction of e-voting as well as when evaluating its set-up and use, etc. A useful source of information with this respect are the country reports presented at the biannual review meetings organized by the Council of Europe regularly since the adoption of the Recommendation in 2004.

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14 They can be found under «Biannual Review Meetings» at <http://www.coe.int/t/DEMOCRACY/ELECTORAL-ASSISTANCE/themes/evoting/default_en.asp>.
3. APPLYING STANDARDS TO E-VOTING

3.1 From (broad) legal principles to (detailed) technical regulations

E-voting, as any other method of voting, should comply with the legal framework that applies to it. The legal framework includes both general provisions applicable to elections and e-voting detailed regulations. A schematic illustration of such a framework is presented below.

![Diagram showing the relationship between «Hard» Law and «Soft» Law]

The higher level principles are defined quite broadly, so their meaning and application in an electronic context need to be clarified. Translation of principles into detailed instructions for electronically backed solutions is done through lower level regulations. This is mainly the task of the national regulator.

However, studies show that regulatory instruments are struggling to catch up with the introduction of technology in the voting and counting process. There are many reasons for this, related both to the underlying high tech which is not understood by the layman and to the legal requirements themselves. For instance, voting should respect both the anonymity and/or secrecy of the voter (and her vote) and the one-person-one-vote principle. Making sure the voter has the right to vote and has not already voted implies a breach of anonymity (at least). Traditional voting methods foresee procedural measures (which can be meaningfully observed by the layman) to ensure that both principles are respected. The same is more difficult to do in and e-voting context.

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15 19. Internationales Rechtsinformatik Symposion, Salzburg, Austria
To conclude, due to the complexity of its underlying technology, the application of principles to e-voting is not self-evident: translation of principles in detailed instructions is needed. Clear and detailed instructions are necessary for building, maintaining, operating, evaluating, etc. electronically backed solutions. Finally, translation requires expertise from different fields (legal, technical, social). This is probably the main reason why countries are very much interested in Rec(2004)11 and in the biannual meetings which provide guidance in addition to providing a forum where to discuss and exchange on this complex topic.

In the following lines we will present an overview of the Council of Europe Recommendation on e-voting, its content, importance and evolution. We will also mention the intrinsic limitations of this instrument and will comment on some major national legal developments.

### 3.2 The 2004 Recommendation on e-voting

The Recommendation of the Committee of Ministers to member States on legal, operational and technical standards for e-voting was adopted on 30 September 2004. The 2002 Recommendations defines e-voting as the use of electronically backed solutions to cast a vote in political elections and referendums. The new Recommendation extends this definition to cover optical scanners used to register paper votes (see point 3.4 below).

The Recommendation is neutral with respect to the introduction of e-voting. It does not recommend member states to introduce e-voting, but recognises that new information and communication technologies are increasingly being used in day-to-day life and expects that their use in elections might contribute to increase participation, improve access for disabled citizens or those residing or staying abroad, reduce overall costs over time, deliver voting results reliably and more quickly, provide the electorate with a better service, etc.

The rationale for introducing Rec(2004)11 can be summarized as follows: (i) apply the principles of democratic elections to e-voting, (ii) provide member states with a comprehensive checklist for all stages of the electoral process, (iii) set minimum standards for remote and non-remote e-voting and (iv) promote and ensure interoperability of e-voting systems.\(^ {17}\)

Minimum standards were expected to be used as benchmarks by countries helping them to create a sound legal basis for e-voting. Rec(2004)11 was expected to be followed by the ICT industry. The adoption of common standards at the international level was considered key to guaranteeing the respect of all the principles of democratic elections and referendums when using e-voting.\(^ {18}\)

Rec(2004)11 recommends the governments to comply with its requirements and to consider reviewing domestic legislation in the light of the Recommendation. More precisely, the recommendations to member states are three: (rec.i) e-voting shall respect all the principles of democratic elections and referendums and be as reliable and secure as democratic elections and referendums which do not involve the use of electronic means; (rec.ii) the interconnection between the legal, operational and technical aspects of e-voting, as set out in the Appendices, has to be taken into account when applying the Recommendation and (rec.iii) member states should consider reviewing their relevant domestic legislation in the light of the Recommendation.


A review meeting two years after the adoption in order to provide the Council of Europe with a basis for possible further action on e-voting was foreseen (rec. v). As a matter of fact, review meetings were held on a regular basis each two years. For the purpose of the review member states kept under review their policy on, and experience of e-voting and reported the results.

The five recommendations are followed by the Appendices I to III which contain the actual standards, namely the legal (I), operational (II) standards and the technical requirements (III). The list is considered to be non-exhaustive. The explanatory memorandum provides valuable information and an insight into the historical context.

### 3.3 The special place of the Recommendation on e-voting

As the only international instrument to legally regulate e-voting Rec(2004)11 became rapidly a reference for Council of Europe States that introduce or envisage introducing e-voting. It can be safely said that all Council of Europe countries that conduct or envisage conducting e-voting look to the Recommendation for guidance. In particular internet voting systems were either conceived or updated by incorporating the Recommendation, as was the case in Estonia, Finland, the Netherlands and Switzerland. Presumably this was also the case for more recent e-voting developments in the Czech Republic, the Republic of Moldova, the Netherlands, Romania and Spain.

Other international organisations have also developed important guiding documents on e-voting or more generally the use of new voting technologies in elections. However, the Council of Europe Recommendation remains so far the only one to offer guidance on how to legally regulate e-voting. Other organisations focus on formalizing procedures (for e-voting introduction, observation, etc.) and on identifying good practices. Formalized procedures and methodologies have been domain specific. These are important practice-oriented documents; however they do not provide guidance on regulating e-voting.

The main difference between the Council of Europe soft law on e-voting and documents by other organisations on e-voting lies probably in the role and mission of the Council of Europe which is to safeguard values which are the common heritage of their peoples including values of political liberty and the rule of law. The aim of the organisation as laid out in article 1 of its Statute is to achieve a greater unity between its members for the purpose of safeguarding and realising principles which are their common heritage. This aim shall be pursued by agreements and common action in legal and administrative matters. Action may take the form of recommendations to the governments of members (art. 15 of the Statue).

The success of the recommendation confirms that guidance is needed, especially on the sense and application of the European electoral heritage principles to electronically backed solutions.

### 3.4 The 2017 (new) Recommendation on e-voting

In the light of e-voting practical experiences, it was rapidly felt that the 2004 Recommendation needed some adjustments. A detailed description of developments that motivated the update and on its conduct can be found in different reports and conclusions published on the dedicated page of the Council of Europe Secretariat, the Election assistance and census divi-

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19 Organisations like OSCE/ODIHR, OAS, IDEA, the Carter Center, IFES, the NDI or the EU have produced guidelines on the introduction of new technologies in the voting process.
The aim of the revision was to ensure that the Recommendation is up-to-date, balanced and responsive to recent experiences with e-voting and legal, technical and social developments.


The new Recommendation has a new, broader, definition of e-voting which goes beyond the casting of the vote through electronic means and extends to the electronic scanning and counting of paper ballots. As a result, both the Council of Europe and OSCE/ODIHR have now the same definition of e-voting.

A clear decision was taken since the beginning of the updating process to distinguish e-voting high-level standards applicable throughout the region from more detailed ones. High-level standards indicate the objectives that an e-voting system should fulfil in order to comply with the principles of the European electoral heritage. They are included in the new Recommendation.

More detailed provisions that explain how to implement the objectives in a specific context (e-voting system, electoral process, etc.) and how to check compliance of the system with the e-voting standards (and eventually the European electoral heritage principles) are included in another document, called the Guidelines. This lower-level document can be updated easily and more frequently. The nesting of provisions and the close relations between the new Recommendation and the new Guidelines are made clear in both texts. It is understood that the new Guidelines are work in progress and need to be completed and developed in the future. The Recommendation is expected to be a stable document.

The small group of experts that produced the new Recommendation and Guidelines considered some 250 provisions on e-voting including all provisions from Rec(2004)11 and the Guidelines on Transparency and Certification, OSCE/ODIHR recommendations from its election assessment and observation reports and technical research papers. The consolidated provisions were included in the new Recommendation and Guidelines. The new documents were submitted for consultation to the group of national experts and organisations in charge of the update (CAHVE). A virtual discussion took place during 9 weeks which contributed to clarifying and improving the two documents. The finalised Recommendation and Guidelines were eventually discussed and approved at the CAHVE meeting in November 2016 and have been transmitted to two other Council of Europe bodies – the GR-DEM and the Committee of Ministers for final approval. Adoption by the Committee of Ministers is expected in spring 2017.

In addition to being classified in two categories (hard-core/Recommendation and implementation/control/Guidelines), standards have also been grouped around the main principles of the European Electoral Heritage. These are the following: universal, equal, free, secret suffrage.

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20 http://www.coe.int/en/web/electoral-assistance/e-voting. The author of this paper has authored the reports on the update of the Recommendation since 2013.

21 The Recommendation is expected to be adopted in the coming weeks. The Explanatory Memorandum and the Guidelines will be also approved. After adoption the Recommendation will receive a number which replaces the XX after Rec(2017).

22 The small group of experts included A. Driza Maurer (lead), J. Barrat, R. Krimmer, M. Volkamer and S. Neumann

23 Of 34 registered participants from all Council of Europe countries and interested organisations, some 21 contributed actively by submitting some 423 comments.
frage, respect of regulatory and organisational standards, respect of transparency and observation requirements, accountability of stakeholders in charge of e-voting and objectives to ensure the e-voting system’s reliability and security. These are also the main headings (sections) of Appendix I of the new Recommendation.

Appendix I contains the actual e-voting standards. Under each section (which refers to a principle) there are a number of standards which express objectives that an e-voting system should fulfil in order to comply with that principle.

Rec(2004)11 was a pioneer effort to apply international legal requirements for democratic elections to e-voting. The new Recommendation (2017)XX and the new Guidelines which will eventually replace the 2004 document and the associated guidelines are an improved version of the Recommendation as they integrate lessons learned in the past years.

The new Recommendation has mainly two limitations. As a regional document, the new Recommendation only contains minimum standards which are applicable in every country of the region. Depending on the resources available, more detailed guidelines (applicable only to specific situations) may be developed at the Council of Europe. However, more detailed, national regulations will always be needed.

The other limitation, also present during the recent update (and presumably for the future development of the Guidelines), refers to the limited time and human resources at disposal for the update. Another constraint during the update was the requirement to keep as much as possible from the old recommendation so as not to rush countries that already intensively work with that document.

3.1 National specificities

National authorities may adopt a stricter interpretation of a principle than what’s indicated by hard and soft law regional instruments. So it is possible that the same principle is interpreted in a stricter way in one specific country than in the others.

This was the case with the interpretation of the principle of transparency of elections by the German Constitutional Court. The Court referred to the principle as enshrined in the national constitution, and, for the first time in its decision of March 2009 on e-voting, the Court deduced a principle of the “public nature of elections”. According to the judges, this principle requires that each voter must be able to comprehend the central steps in the elections and verify reliably that his or her vote has been recorded truthfully – without any special prior technical knowledge. This is virtually impossible as far as e-voting solutions are concerned.

The Constitutional Court of Austria, in its December 2011 decision which declared unconstitutional the administrative level regulation of e-voting for the Students’ Union Elections of 2009, reached a similar conclusion, by taking another interpretative path. The Court stated that the principle of elections’ transparency and verifiability does not imply a so-called ‘public nature of elections’, in Austria. The court referred to another principle for invalidating the e-voting regulations: sufficient detail. According to this principle and to the Court, a sufficiently detailed regulation would allow the Electoral Commission, the body in charge of controlling elections and verifying results, to understand and control in a meaningful way an e-voting system, without outside help from computer specialists.

Other countries like Estonia or Switzerland do not have a “public nature of elections” principles and do not require that the layman (be he/she a member of the EMB) understand and control the technical details of e-voting. The system and its most important parts, such as verifiability, are built using peer-reviewed and approved cryptographic solutions. Control is delegated to democratically and transparently appointed (trusted) experts.
These examples illustrate the importance of national stakeholders in interpreting and further developing European electoral heritage principles. New interpretations, if embraced by a certain number of countries, may eventually become soft law, to the extent that they translate sufficient common agreement.

4. OUTLOOK

The experience with Rec(2004)11 indicates that it is important for a soft law instrument to foresee a forum for regular exchanges and a review mechanism for necessary updates, especially for documents like the Guidelines. This is indispensable if soft law instruments are to keep track of ongoing technical, legal or political developments.

The biennial review cycle of Rec(2004)11 partially fulfilled this role. The new Recommendation now foresees periodical review meeting and introduces a formal review mechanism, which was previously missing. These elements were strongly supported in the past and at CAHVE by national experts in charge of elections and e-voting.

Another important element is the multi-disciplinary nature of e-voting which requires combined expertise from different areas. Developments in the countries and with Rec(2004)11 provide evidence that the involvement of legal and social science experts as well as of information and communication technology experts is absolutely necessary.

Finally, international soft law instruments provide precious guidance; however they only include a limited set of standards applicable throughout the region (at the Recommendation level). Countries can and must do more, to take into account their specific situation and needs, among others. This has been the case with e-voting. The old Guidelines on transparency suggested for example that countries experiment verifiability techniques which allow for more transparency. A few years later, almost all countries that use e-voting (both remote internet voting and e-voting on voting machines at polling stations) have introduced mandatory regulations and require certain verifiability tools as a precondition for allowing e-voting (including individual and/or universal verifiability tools). This happened for instance in Norway, Estonia, Switzerland, Belgium and was motivated by lessons learned from previous experiences, legal and political developments or inputs from academia, specific to each country.
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A jurist, Ardita works as an independent legal consultant in political rights, electoral legislation and new voting technologies. She was appointed in April 2015 leading expert of the Council of Europe Ad hoc Committee of Experts on legal, operational and technical standards for e-voting (CAHVE), tasked with the drafting of an updated Recommendation on e-voting. The new recommendation and guidelines were approved by CAHVE last November.

Ardita was previously a jurist and director of the internet voting project at the Swiss Federal Chancellery (2006-2012). Her contributions include: drafting regulations on e-voting; planning, implementing and supervising the e-voting channel; monitoring compliance of e-voting with national and international standards and good practice; developing electoral data standards.


This year Ardita joined the University of Zurich, Centre for Democracy Studies (ZDA) as a doctoral researcher. She is currently writing a PhD thesis on the relation between the constitutional principles of freedom to vote and the use of new voting technologies.

Selected publications from the author


