

The New Belgian E-voting System

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Abstract: In use since 1994, the Belgian e-voting system has reached the end of its useful life. A new prototype (an improved paper-based voting system), developed by a consortium led by Smartmatic, will be used for the first time in October 2012. This paper takes a look at the workings of the new system and carries out a brief analysis of its compatibility with the main international election standards.

1 Introduction

A new e-voting prototype will be used for the first time in Belgium's upcoming regional elections in October 2012 and is meant to replace the old voting machines, which have been in use since 1994.

The system is based on a proposal developed, at the request of the government, by a consortium of Belgian universities and presented in a comparative study on e-voting. Although the study was partially granted the green light in a 2008 report from the Council of Europe and an October 2011 test of the new system took place with very few problems, some issues still remain open: among them are the concerns of some political parties and civic associations regarding the transparency of the system. It should also be pointed out that, although the new system will be implemented in the Flanders and around Brussels, the Walloon Region seems to be working on developing its own system.

After an outline of the history of e-voting in Belgium (§ 2), this paper will examine the 2007 BeVoting study and the 2008 Council of Europe Report (§ 3). It will then focus on the functionality of the new system and the tests carried out in 2011 (§ 4) and will finally take a look at some issues that may still remain open to discussion, especially in regards to international election standards for e-voting (§ 5).

2 Historical background

Belgium was one of the first countries in the world to use e-voting technology. Following an initiative from the Minister of the Interior in 1989, the Federal Parliament approved a law¹ in July 1991 in order to start testing two different e-voting systems² in two electoral cantons (Waarschot in Flanders and Verlaine in Wallonia) for the parliamentary and provincial elections of November 1991.

After that first experience, a system based on a magnetic card³ was chosen to continue with e-voting, and a law⁴ was passed in 1994 establishing the general framework for e-voting in the country. E-voting was expanded throughout Belgium in two waves: in 1994 1.4 million voters participated (20% of the voters) and in 1999 over 3.2 million⁵ voters (44% of the voters) cast an e-vote.

Although the expansion of e-voting to the rest of the country had been officially planned, no further extension has taken place since 1999, and the same municipalities that piloted the program continue to use it today⁶.

E-voting created some controversy in Belgium for several years. According to the OSCE Election Assessment Mission for the 2007 Federal Elections see [Os07, p. 10]: *“While the overall technical performance of the e-voting procedures would not appear to be fundamentally questioned, some political party officials, in particular of the French-speaking side, and civic group activists, have expressed concerns about e-voting. The focus of their criticism largely stems from concern with regard to the lack of effective public oversight of e-voting”*. We can indeed find some contentious incidents⁷,

¹ Loi du 19 juillet 1991 organisant le vote au moyen de systèmes automatisés dans les cantons électoraux de Verlaine et de Waarschot, published on the *Moniteur belge* on 3 Septembre 1991.

² One of the systems tested during those elections was based on a touch panel similar to those used in the Netherlands. The other system (used last in the 2010 federal elections) was based on a magnetic card and a voting machine with a light pen.

³ Currently, there are two e-voting systems in Belgium: “Digivote” (STERIA) which covers approximately 85% of the market and “Jites” (STESUD) which covers approximately 15% of the market. It is up to the municipalities (communes) that opted for e-voting to choose which system they will use, but since the two systems are incompatible, all municipalities within one single canton must agree on the same system. With the current system, the voting process starts with the voters indentifying themselves to the Polling Station Chair and receiving a magnetic ballot card. In the polling booths, voters insert the card into a computer and the candidate lists appear on the screen. When choosing from the candidate list in the computer, the vote is recorded on the magnetic card. The voter then shows the card to the Polling Station Chair for verification that there are no marks and inserts it into an electronic ballot box. Votes are read from the card by the electronic ballot box and saved to the RAM and on ballot box’s hard drive.

⁴ Loi du 11 avril 1994 organisant le vote automatisé (<http://www.bruxelselections2006.irisnet.be/download/06.pdf>), modified by loi du 12 août 2000 (*Moniteur belge* du 25 août 2000) is the main law regulating e-voting in Belgium.

⁵ In Wallonia 39 municipalites out of 262 (22% of the voters), in Brussels-Capital all the municipalities (100% of the voters) and in Flanders 143 municipalities out of 308 (50% of the voters) are utilizing some form of e-voting.

⁶ 2000 local elections, 2003 federal elections, 2004 regional and European elections, 2006 local elections, 2007 federal elections, 2009 regional and European elections and 2010 anticipated federal elections.

⁷ For example an e-voting problem reported in the local elections of 2003 in Schaerbeek in which one candidate got 4096 extra votes.

opposition from some civil society groups⁸, and concerns expressed by some members of the Parliament and Senate⁹ toward e-voting. In regards to these parliamentary controversies, the OSCE had already pointed out during an OSCE expert-visit on new voting technologies [see Os06 pag 4] that apprehension “*seems to be the main reason why the use of e-voting in Belgium has not been extended beyond the current 44% of the electorate using it since 1999. Some of the actors met complained that little or no debate took place when the experiment started, and the e-voting system has never been the object of a national evaluation/discussion.*” Furthermore, the OSCE pointed out that “*the procedure, which did not provide for a voter verifiable paper trail, is being criticized in some fora for lack of transparency.*” Critics say that the system suffers from a perceived “*limitation of possibilities for democratic control, with a particular emphasis on the absence of a voter verifiable auditable paper trail.*”

Due to the issues mentioned above, new security measures and controls were added at different stages:

1. The Ministry of Interior published the source code of the voting software on its website (done on election day after the closing of the polling stations).
2. The creation of the College of Experts¹⁰, an “independent” expert committee, to monitor the use and proper working of automated voting systems.
3. The certification of the hard- and software by an independent external company. The company needs to have been approved (*accréditation*) by the Council of Ministers as able to certify e-voting systems in accordance with the law and is chosen following an assessment of its application. This procedure began in 2003 following a recommendation from the College of Experts.
4. The introduction of an automated optical-reader counting system called “Favor” for the elections in 1999, 2000, and 2003, in which voters cast their votes using traditional ballot papers, which were then scanned by an optical reader.
5. The introduction of a “ticketing” system for the 2003 elections in the two locations that originally started e-voting. This new system added a paper trail (VVPAT) to the previous e-voting system, whereby the voters, after marking their choice, could see the vote on a ticket behind a glass and, if corresponding, the voter confirmed his or her choice and the ticket was deposited into a box.
6. The possibility for political parties with at least two representatives to nominate an independent IT expert to control the source code and the electoral software; the duties of the IT expert are limited so as not to disturb the workings of the College of Experts.

⁸ One of the most active groups in Belgium being PourEVA.

⁹ Amongst others ECOLO (<http://www.poureva.be/spip.php?article138&lang=fr>) and PS (<http://www.senate.be/www/?Mival=/consulteren/publicatie2&BLOKNR=27&COLL=H&LEG=2&NR=148&SUF=&VOLGNR=&LANG=fr>)

¹⁰ The *College d'experts*, created by the *loi du 18 décembre 1998*, is an independent, consultative public regulatory body appointed by both chambers of Parliament for national elections and by regional Parliaments for local ones. It is composed of IT experts and has large legal control competencies (following article 5bis of law 1994 *organisant le vote automatisé*); they have access to both the hardware and software 40 days in advance of the elections and up to 15 days after the elections. On election day, they have access to any polling station. The College of Experts delivers a report within 15 days after each election. There is no legal obligation to publish it although it is normally done.

Since the 2004 European elections, all tests (optical scan, ticketing) were discontinued but the other controls remained in place. A number of proposals for legal amendments have been presented since then, although none of them have been approved. Nonetheless, a resolution from the regional Parliament of Brussels-Capital was adopted in July 2006¹¹ asking for increased “*transparency to the e-voting system*”.

Following intense reflection on the future of e-voting since 2006¹², the government commissioned an in-depth comparative study on e-voting systems. The proposed solution was a combination of a touch-based e-voting machine and a VVPAT to be scanned by the voter and then inserted into a ballot box.

The study was the subject of a parliamentary debate in the Federal Parliament in 2008 and, following a resolution¹³ enabling the continued experimentation with the e-voting, on July 2008, the Council of Ministers entrusted the Minister of Interior to sign a cooperation agreement with the regions¹⁴ who wanted to participate. An agreement was signed between the Federal Government and the Flemish and Brussels-Capital Regions and a tender¹⁵ was launched by the three administrations for the development of a new e-voting system¹⁶. As a result of the tender, a 15-year contract was awarded to a consortium led by Smartmatic.

The new e-voting machines were tested on October 27, 2011 in the Flanders and Brussels-Capital regions and will be used for the first time during the next provincial and municipal elections on October 14, 2012.

¹¹ <http://www.weblex.irisnet.be/Data/crb/Doc/2005-06/110152/images.pdf>

¹² In a response to a written question, the Ministry of Interior announced on May 3, 2006 the creation of a working group in charge of defining the new rules for an e-voting system that will be applied from 2008 onwards and that will have to take into account “*les possibilités de contrôle des opérations de vote par le citoyen et les possibilités de recomptage des votes émis au moyen du vote électronique*”. <http://www.senat.fr/lc/lc176/lc176.pdf>

¹³ <http://www.lachambre.be/FLWB/PDF/52/1278/52K1278001.pdf>

¹⁴ Following a transfer of know-how in 2001 (*Loi spéciale du 13 juillet 2001*), the regions maintained their competencies for the organization of municipal and provincial elections.

¹⁵ Tender published on September 1, 2008 in the Belgian *Bulletin des adjudications: Avis de marché N. 051333*, page: 20459, SPF Interieur. *Développement d'un système de vote électronique*. Published on September 1, 2008 in the Official Journal of the European Union: OJ/S S170. Published on 03 September 2008.

¹⁶ The Tender oversaw the establishment of a 15-year framework contract with several providers. It implied a joint-mixed contract with a majority of services (organized on behalf of the Ministry of Interior and the Regions who would join) but including supplies and had an estimated value of between 75 and 175 million euros.

As for Wallonia, the government wanted to end the actual experimentation of e-voting¹⁷, stating that traditional voting should be promoted and that alternatives to e-voting that offer a paper trail should be examined. In June 2011, the Walloon Government announced¹⁸ the return to traditional voting for the 39 municipalities where e-voting machines had been used, and launched a tender to develop a new e-voting system; that tender is currently suspended. According to the Federal Public Service Interior¹⁹ (FPSI) the aforementioned communes will continue to vote using the current e-voting system.

3 The 2007 BeVoting Study and the 2008 Council of Europe Report

The Belgian federal and regional administrations commissioned a consortium of seven Belgian Universities²⁰ with the task to make an independent comparative study of different e-voting systems known as the BeVoting study (the Study) [see Ku07]. The Study was tasked with finding the best e-voting system with respect to international standards and the Belgian electoral legislation. That proposal would include the requirements for the new voting system in such detail that the report may serve as a technical appendix to the call for tenders.

The Study, delivered in 2008, is divided into two parts. The first part presents the latest innovations in electronic and Internet voting systems in all aspects (including pros and cons and the costs of different voting systems). It also evaluates the acceptance of e-voting by Belgian voters²¹. The second part proposes five possible e-voting systems²² and their technical and specific requirements.

From the five systems, the one preferred by the Consortium is called “*improved paper-based voting system*”. In this system, the voter casts his vote using a voting computer and the computer prints the vote on a paper ballot that has two parts: a human-readable part and a machine-readable part (a barcode or an RFID chip). Once the vote is printed, the voter verifies that the printed vote is the one he or she has cast and then the voter folds the ballot so that only the machine-readable part remains visible or inserts it into an envelope. The voter then presents it to the president of the polling station to have it inspected for visual marks and then deposits it into the ballot box.

¹⁷ http://easi.wallonie.be/servlet/Repository/DPR_wallonie_2009.PDF?IDR=9295

¹⁸ http://www.poueva.be/IMG/pdf/Notification_NGW_-_vote_electronique_090611.pdf

¹⁹ The Federal Public Service of Interior (Service public fédéral Intérieur), formerly the Ministry of Interior, is a Federal Public Service of Belgium, created in 2002 by Royal Order and in charge, among other things, of Institutions and Population (including the administration of elections). <http://www.ibz.be>

²⁰ Katholieke Universiteit Leuven, Universiteit Antwerpen, Universiteit Gent, Université Catholique de Louvain, Université de Liège, Université Libre de Bruxelles and Vrije Universiteit Brussel.

²¹ In the report, the consortium concluded that the introduction of e-voting had no significant effect on voting behaviour and that it only reduced the number of blank and invalid votes and also slightly reduced voter turnout.

²² “*improved paper-based voting system*”, “*direct optical scanning*” (based on paper ballots), “*thin-client system*” (e-voting machines connected to a local server using a local network with the possibility to produce a VVPAT), “*Internet/remote voting system*” and “*kiosk voting*”.

A report from the Council of Europe (the Report) [see Co08], published in 2008, assessed the overall coherence of the above-mentioned BeVoting study and the compatibility of the five scenarios presented in the Study (and especially of the proposed one) with the recommendations (2004) of the Council of Europe on the legal, operational, and technical standards for e-voting (the Recommendations) [see Co05].

The Report reminds us that none of the scenarios, as presented in the Study, fully comply with the Recommendations, but, following some adjustments to the first scenario (*“improved paper-based voting system”*) there should be no problem in complying with the Recommendations. For the other scenarios, more modifications would be required, the Internet voting option being the one which would need the greatest number of legal and security changes.

As for the first scenario, since it is quite similar to the current electronic voting scheme in Belgium, the OSCE considered that it would not require a significant adaptation in the electoral routine of Belgian e-voters under the present system, which is a clear advantage, although it introduces some key changes to both update the technology and to increase transparency.

There were several issues pointed out in the Report that need to be taken into account by the Belgian authorities:

1. Although the Recommendations do not express a preference between the human-readable and the machine-readable part of the vote, the Report signals that from a legal standpoint the human readable part should prevail as it is the only part comprehensible to the voter.
2. The proposal of a non-transparent ballot box, which could go against the transparency of the system.
3. There is a need to strengthen the current audit and certification mechanisms.
4. Officials should re-think the current arrangements when it comes to training.
5. The nature of the physical division of a vote could have legal implications as to which part of the separated vote represents the genuine will of the voter.
6. The fact that the study suggests using a non-transparent ballot box does go against the goals of transparency
7. A detectable amount of radiation was detected from the voting machines.

4 The New E-voting System

The new voting system²³ was developed by a Smartmatic-led consortium that also includes Steria and Wincor-Nixdorf. Specifically customized for Belgium, it is based on the system proposed in the aforementioned BeVoting study.

This new prototype seems to be a combination of the first two systems proposed in the study (*“improved paper-based voting”* and *“direct optical scanning”*) and consists of a combination of a touch-based electronic voting machine (17” touch screen SAES3350), a barcode printer, a scanner, and a ballot box (e-urn).

As with the current system, it is the president of the polling station that activates the voting machine with a USB key booting up the equipment. The voting procedure starts²⁴ with the verification of the identity of the voter by the polling station staff after which the voter is given a token (smartcard) which will allow him or her to activate the voting machine in the voting booth.

Once the voter has chosen and confirmed his or her vote on a touch screen, the machine prints out a ballot containing two parts, a human-readable part and a machine-readable part (a two-dimensional barcode similar to a QR). After verifying that the printed vote is correct, the voter is supposed to fold the paper in two, with the human-readable part on the inside, and take it to the polling station officials, who will inspect it for marks. The voter then goes to the separately located ballot box, scans the barcode on the ballot using the scanning unit, and puts it in the opaque²⁵, sealed ballot box (e-urn). The scanning unit is connected to a laptop, which automatically stores the vote cast on two redundant, secure USB sticks. The laptop only contains the electoral administration tool used for administering the voting cards and for operating the USB-sticks, nothing else. Linux is the operating system used for the laptops.

The system includes a safeguard so that the screen of the president of the polling station will show the message *“double vote”* and the vote will not be registered²⁶ should a printed ballot be scanned a second time,

²³ <http://www.vlaanderenkiest.be/sites/default/files/BeVoting-brochure-belgicav-3.1.pdf>

²⁴ http://www.ibz.rrn.fgov.be/fileadmin/user_upload/Elections/experiment-201110/voteren10etapes.pdf

²⁵ In its Report [see Co08a pages 6-7], the Council of Europe was against the proposed use of a non-transparent ballot box in the Study [see Ku07b pag 44] as it would clash with the transparency of the system. Nonetheless, the FPSI points out that since the vote is printed in the booklet and an envelope is not used, if a transparent box were used, there could be a risk for the secrecy of the vote if the booklet would open inside the urn.

²⁶ According to the FPSI, in order to make sure that each barcode is unique, there is a unique key generated and inscribed within the barcode (for each polling station and vote).

The main novelty of the system is that the vote is registered in paper and not in a magnetic card; like that, the voter has the opportunity to verify if the vote has been correctly registered; the voting paper would also serve as a VVPAT in the case of a necessary recount.

4.1 Testing the System

At the request²⁷ of the Federal Minister of the Interior, the Vice Minister-President of the Flemish Government and the Minister President of the Government of the Brussels-Capital Region decided²⁸ to organize a large-scale, public, non-binding pilot test²⁹ on October 27th, 2011, with fictitious candidate lists in order to check the reliability of the new e-voting system under real conditions.

In order to make the test as representative and realistic as possible, the organizers chose a wide range of places and voters to carry out the tests, so that so 6.134 votes were cast in 22 different locations with 90 voting machines³⁰; also, the same opening and closing hours for the polling stations as in real elections were applied. Every polling station consisted of a small staff: a president, two assistants, and two observers for a total of 130 election staff (all of them members of the Federal, Flemish, or Brussels administrations). As reported by the FPSI, although some minor issues occurred during the tests (electricity failures, problems with printers and scanners, etc.) most of the reactions from the public were very positive and the only moment where there were doubts was with the scanning since it is a novelty of the system. It also seems as though a large number of voters didn't fold their votes before leaving the voting booth and that they scanned their votes without having them folded³¹. According to the FPSI, this could easily be solved through voter information and training.

As reported by the FPSI, the presidents of the polling stations declared that *"the public finds the system simple and easy. There have been small technical problems, but we can say that the experience has gone very well."*³² Erwin Hertens, from the FPSI, declared that *"this is excellent! With all my heart thank you to all those who have done this for us on a voluntary basis. We can say that the system has really been tested from every angle, and we have now to review all comments and to make a deep evaluation."*³³

²⁷ http://www.ibz.rn.fgov.be/fileadmin/user_upload/Elections/experiment-201110/Com-presse-experience-systeme-vote-electronique-241011.pdf

²⁸ The Minister of Interior at that time, Annemie Turtelboom, declared that before the different administrations decided to purchase the system, they wanted to test the e-voting machines in real conditions (http://www.ibz.rn.fgov.be/fileadmin/user_upload/Elections/experiment-201110/Com-presse-experience-systeme-vote-electronique-241011.pdf)

²⁹ <http://www.experience2011.rn.fgov.be/fr/>

³⁰ <http://www.ibz.rn.fgov.be/index.php?id=3011&L=0>

³¹ Ibid

³² Ibid

³³ Ibid

This recently tested prototype is meant to replace the old machines and is supposed to be used for the first time in the next Belgian provincial and municipal elections in October 2012³⁴, in 149 municipalities in the Flemish Region and 2 municipalities in the Brussels-Capital Region.

5 Analysis of the New System

As has been repeatedly pointed out, in e-enabled elections it's not possible for everybody to understand the system, and therefore voters need to rely on others who are in a position to understand the IT materials and the processes. Therefore, it's very important that the election administration is as transparent as possible. This transparency will contribute to the voter's knowledge and understanding of the voting system. Introducing auditable measures like a second storage medium which provides physical, unalterable evidence of how the voters voted can help to increase transparency and a voter's trust in the system.

Consequently, the introduction of a human-readable part in the new Belgian e-voting system implies a clear improvement with regards to the transparency and verifiability of the electoral procedure, since the new ballots would serve as a VVPAT and would allow for audits and recounts and could also be used as a potential backup in case of a system crash. All this would potentially increase voter trust and confidence in the Belgian e-voting system.

On the other hand, it should be noted that several issues still remain open. Among them, several important topics that are consistently addressed both by the Council of Europe and OSCE when dealing with e-voting systems:

- Transparency: According to the Council of Europe, in order to increase transparency, it is essential that stakeholders have as much access as possible to relevant documents, meetings, activities, etc. PourEVA states that the prototype used computers dedicated for this single purpose and used proprietary code. According to the FPSI the voting software will work with Linux and the source code will continue to be made publicly available.
- Secret suffrage: It is one of the basic principles of democratic elections. This implies that when implementing e-voting systems, assuring that the link between the identity of the voter and vote itself is permanently removed.

With this new system, as with the previous one, this would seem in principle to be guaranteed since the identification and authentication phases are separate from the voting one.

³⁴ Provincial and municipal elections (*Elections provinciales et communales*) to be held in the 3 regions of Belgium on October 14, 2012. The regulation and organization of provincial and municipal elections is an exclusive competence of each of the three regions in Belgian.

Although it appears from the tests of the new system that some voters don't fold their paper votes (which could endanger the secrecy of their votes), the FPSI notes that to solve this issue, an information and training workshop needs to take place in order to make the voters familiar with the new system.

On the other hand, according to PourEVA, there is a potential danger to voter privacy if on election day a ticket cannot be scanned (due to an IT bug, a problem with the printer, etc.) and the voter needs assistance from the election staff, they could know the sense of the vote of that particular voter. According to the FPSI, in a case like this, the vote is cancelled and the voter can vote again. Furthermore the polling station staff is responsible, under oath, for guarding the secrecy of the vote (with financial and criminal sanctions possible for the polling station heads that don't comply).

Finally, there may remain some potential danger (common to every IT system) of electromagnetic radiation that could infringe upon the secret suffrage by allowing others to see what information the machine is managing, printing, or receiving. This was already pointed out by the 2008 Council of Europe Report [see Co08a pag 4] and in this respect PourEVA questioned³⁵ whether all machines were tested against this kind of attack and if they will be for every election. According to the FPSI, a scientific study has determined that the voting machines are in accordance with the requirements of the NATO Zone 1³⁶ and that furthermore, since the polling stations are composed of 5 voting machines, the radiation from the computers would mix.

- Machine-readable/human-readable part of the vote: The Council of Europe [see Co10a pages 10 and 11; Co10c pages 11, 12 and 22] states that when introducing a paper trail, arrangements have to be made to deal with any discrepancy that may arise between the machine- and the human-readable part of the vote; clear rules should be implemented to determine which type of vote takes precedence. The Council of Europe Report [See Co08a pag 5] pointed out that although the Recommendation does not express a preference between the barcode or the ballot booklet inserted in the ballot box, from a legal standpoint the human readable part should prevail as it is the only part comprehensible to the voter.

According to the FPSI there is still no legislation related to the new e-voting system, since the next elections organized by the federal government will normally take place in 2014.

³⁵ <http://www.poureva.be/spip.php?article701>

³⁶ According to the TEMPEST Standards, the NATO SDIP-27 Level B and USA NSTISSAM Level II ("Laboratory Test Standard for Protected Facility Equipment") is a standard for devices that are operated in NATO Zone 1 environments, where it is assumed that an attacker cannot get closer than about 20 m (or where building materials ensure an attenuation equivalent to the free-space attenuation of this distance).

On the other hand, PourEVA noted³⁷ that with the new system the voter cannot verify that the vote registered in the machine-readable part corresponds to the one in the human readable part (PourEVA had already criticized³⁸ that the optical reading system was rejected in the BeVoting study without convincing arguments, arguing that optical reading is a system that offers more control by the citizens and had been declared “reliable and mature” by The College of Experts³⁹). According to the FPSI, there will be a booth at the polling stations where, with the assistance of a barcode reader and a computer, the voters will be able to scan their votes in order to double-check that the human-readable and machine-readable part of their votes do indeed correspond.

- Audit and certification: The Council of Europe [see Co05 pages 11, 15, 19, 20; Co10a pages 9 and 14; Co10c pages 11 and 51] and the OSCE [see Os06 page 5, 9; Os07 pages 12-14 and 23] point out the importance of establishing both audit and certification procedures. Auditable systems play a fundamental role in e-voting, and using paper trails in combination with a mandatory count of paper votes in statistical randomly selected polling stations is an excellent way to bolster trust in the system. Certification should be carried out by an independent body in the most transparent way possible, covering all aspects of e-voting and should serve to verify independently that an e-voting system complies with all the specifications and requirements established.

Regarding the audits, although the Study [see Ku07 pages 12, 16 58, 62 and 66] previews that “*independent auditors can select a random set of ballot booklets to audit elections by confirming that the barcode of these randomly selected ballots corresponds with their human readable part*” and one of the strengths of the new system is that it would allow for random audits, there is still no federal legislation concerning the new e-voting system (according to the FPSI this will in principle be done for the 2014 elections).

As for certification, according to PourEVA⁴⁰ there is no electoral law or regulation describing the characteristics of the prototype for the new voting system against which the certification company could check and certify it. Furthermore, PourEVA noted⁴¹ that the certification of the new system carried out by PwC remains secret.

Even though there seems to be no specific regulation describing the characteristics of the prototype, it should be noted that the new system has been submitted for certification, according to specifications, with an independent company: PriceWaterhouseCooper. A positive report with regards to the system was submitted by PwC in December 2011. In a Parliamentary debate, Ms Joëlle Milquet (current Minister of Interior) replied to a question⁴² that the above-mentioned report stated that “*Based on the activities carried out by us, we can say with reasonable certainty that the software is compatible with the*

³⁷ <http://www.poueva.be/spip.php?article692>

³⁸ <http://www.poueva.be/spip.php?article513>

³⁹ <http://www.senate.be/www/?MIval=/publications/viewPubDoc&TID=50332887&LANG=fr>

⁴⁰ <http://www.poueva.be/spip.php?article698&lang=fr>

⁴¹ <http://www.poueva.be/spip.php?article701&lang=fr>

⁴² House of Representatives. Commission of Interior. Meeting of 18 January 2012. (CRIV 53 – COM 0366) <http://www.lachambre.be/doc/CCRI/pdf/53/ic366.pdf>

hardware available and for the defined scope, the prototype provided in the tender and the application are suitable”; in that debate she also agreed to transmit the certification report to the parliamentarians who requested it.

- Election observation: the Venice Commission [see Ve02 pag 11], the Council of Europe [see Co05 pages 35 and 36; Co10a pag 6; Co10c pag 40] and the OSCE [see Os06 pag 9; Os07 pag 7; Os08 pages 2, 4 and 14] strongly recommend the establishment of legal provisions to allow election observation. This observation should be effective and include, to the extent permitted by law, presence in polling stations and data processing sites and access at all levels to documentation and reports, including minutes, certification, testing, and audit reports, etc. (respecting the principle of non-interference with the administration of the election). Election observation should include international, domestic, and long-term observation.

At the moment, there does not seem to be specific provisions concerning election observation for e-voting, especially in regards to the new system.

Bibliography

- [Be10] Ben Anchour, R.: Etat de la question. Quel avenir pour le vote électronique en Belgique?. A. Poutrain, 2010
<http://www.iev.be/getattachment/8d9066d0-5809-4b54-8add-1a9e718dcc3c/Quel-avenir-pour-le-vote-electronique-en-Belgique-.aspx>
- [Co05] Council of Europe: Legal, operational and technical standards for e-voting. Council of Europe, 2005.
[http://www.coe.int/t/dgap/democracy/activities/key-texts/recommendations/Rec\(2004\)11_Eng_Evoting_and_Expl_Memo_en.pdf](http://www.coe.int/t/dgap/democracy/activities/key-texts/recommendations/Rec(2004)11_Eng_Evoting_and_Expl_Memo_en.pdf)
- [Co08a] Council of Europe: Compliance of the BeVoting Study with the Recommendation (2004) 11 of the Committee of Ministers of the Council of Europe to the member states on legal, operational and technical standards for e-Voting. Strasbourg, February 2008
http://www.ibz.rrn.fgov.be/fileadmin/user_upload/Elections/fr/presentation/Compliance_Belgian_BeVoting_Rec_1_0_final_18_02_08.pdf
- [Co08b] Council of Europe: Meeting to review developments in the field of e-voting since the adoption of Recommendation Rec(2004)11 of the Committee of Ministers to member states on legal, operational and technical standards for e-voting. Strasbourg, 2008.
http://www.coe.int/lportal/c/document_library/get_file?uuid=9c7dec0f-3dde-4024-ae77-e4d6ab6033c2&groupId=10227
- [Co10a] Council of Europe: Guidelines on transparency of e-enabled elections. Strasbourg, 2010
http://www.coe.int/t/dgap/democracy/activities/ggis/e-voting/E-voting%202010/Biennial_Nov_meeting/Guidelines_transparency_EN.pdf
- [Co10b] Council of Europe: Evolution du vote électronique en Belgique: le temps de la transition. Strasbourg, 2010
[http://www.coe.int/t/dgap/democracy/activities/ggis/e-voting/e-voting%202010/biennial_nov_meeting/GGIS\(2010\)8_Belgique%20e-voting%20report%20F.asp](http://www.coe.int/t/dgap/democracy/activities/ggis/e-voting/e-voting%202010/biennial_nov_meeting/GGIS(2010)8_Belgique%20e-voting%20report%20F.asp)

- [Co10c] Council of Europe: E-voting Handbook. Key steps in the implementation of e-enabled elections. Council of Europe. Strasbourg, 2010
http://www.coe.int/t/dgap/democracy/activities/ggis/e-voting/E-voting%202010/Biennial_Nov_meeting/ID10322%20GBR%206948%20Evoting%20handbook%20A5%20HD.pdf
- [Fr07] French Senate. Les documents de travail du Sénat. Série Legislation comparée. Le vote électronique. N° LC 176.
<http://www.senat.fr/lc/lc176/lc176.pdf>
- [Ku07a] KU Leuven et al: BeVoting. Study on Electronic Voting Systems. Part 1
http://www.ibz.rrn.fgov.be/fileadmin/user_upload/Elections/fr/presentation/bevoting-1_gb.pdf
- [Ku07b] KU Leuven et al: BeVoting. Study on Electronic Voting Systems. Part 2
http://www.ibz.rrn.fgov.be/fileadmin/user_upload/Elections/fr/presentation/bevoting-2_gb.pdf
- [Os06] OSCE/ODIHR: Local Elections Kingdom of Belgium. 8 October 2006. Expert Visit on New Voting Technologies Report. OSCE/ODHIR
<http://www.osce.org/odihr/elections/22450>
- [Os07] OSCE/ODIHR: Belgium Federal Elections 10 June 2007. OSCE/ODIHR Election Assessment Mission Report. Warsaw, OSCE/ODIHR.
<http://www.osce.org/odihr/elections/belgium/28213>
- [Os08] OSCE/ODHIR : Discussion paper in preparation of guidelines for the observation of electronic voting. Warsaw, 2008.
<http://www.osce.org/odihr/elections/34725>
- [Ve02] Venice Commission: Code of good practice in electoral matters. Guidelines and explanatory report. Strasbourg, European Commission Democracy Through Law.
[http://www.venice.coe.int/docs/2002/CDL-AD\(2002\)023-e.pdf](http://www.venice.coe.int/docs/2002/CDL-AD(2002)023-e.pdf)
- [Ve04] Venice Commission: Report on the compatibility of remote voting and electronic voting with the standards of the Council of Europe. Strasbourg, European Commission Democracy Through Law. *[http://www.venice.coe.int/docs/2004/CDL-AD\(2004\)012-e.pdf](http://www.venice.coe.int/docs/2004/CDL-AD(2004)012-e.pdf)*

