IGOR BORISOV
VLADIMIR ZHURAVLEV

MODERNIZATION
OF ELECTION PROCESS
IN THE WORLD

MOSCOW 2011

Igor BORISOV,
Chairman of the Council, Russian Public
Institute for Electoral Rights, Ph.D in Law
Vladimir ZHURAVLEV,
Chairman, Election Commission,
Leningrad Region

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INTRODUCTION

Analysing the contemporary electoral systems, which exist in the world[1], one can conclude that there is no "ideal" electoral system that constitutes the political order reference standard of a democratic society. Each state, expressing the will of its people, chooses an electoral system with due consideration of the national identities - historical, economical, social, cultural etc. Actually, it means realization of its rights concerning state electoral sovereignty[2]. In which case, each sovereign state, taking into account its international commitments, defines the direction of such development.

Today with the whole gamma of variety in organizing national electoral procedures a general tendency is observed towards harmonization in issues of regulation for exercising electoral rights and freedom, wherein one can be sure, by comparing the elections in different states of the world. All the states hold elections approximately under the same scheme: The national electoral system is established by legislation (both in the narrow and in the broad aspects), the electorate and procedure for its accounting (mandatory and notifying) is defined, independent electoral bodies are formed or imposed with authorities, election campaigns are conducted with its national identities by periods, stages, restrictions for the participants. Then voting and determining the vote returns and election results.

However the absence of strict criteria and norms for conducting electoral procedures at international level gives great freedom of discretion to national legislators and allows create multiple models for organizing national elections.

As example of consolidation of international obligations of the states in electoral sphere one can give several extracts from international acts that illustrate the sufficiently general and ambiguous nature of "international norms", regulating electoral procedures.

"Each citizen shall have... the right and opportunity.... to vote and be elected in the genuine periodic elections... guaranteeing freedom of voters' expression will" (clause 25 of the International Pact on Civil and Political Rights). The "periodicity of elections" is interpreted in different ways by different states: from 1 year (President of Switzerland) and 2 years (US House of Representatives) to 7 (President of Ireland) and even 9 years (Senate of France up to 2003), "free will of expression" can stipulate insistence of voting (Belgium) and official video-recording of the voting process (Azerbaijan).

"The will of people shall be the basis of the government's power; this shall find its expression in ... the genuine elections, which shall be held ... by ....the forms, guaranteeing freedom of voting" (clause 21 of the Universal Declaration of Human Rights). The international acts do not answer to what extent the voting by fax (USA), post (FRG), internet (Estonia) or voter's signature on the reverse side of the ballot (Finland) guarantee real freedom of voting.

Over the period from 2003 to 2011 in the Organization for Security and Cooperation in Europe (OSCE) region alone 182 election campaigns were held for the national level elections viz. elections of the heads of states, national parliaments and their chambers. Each of these election campaigns had both its legislative and organizational specifics, retaining "unity in diversity".

Probably, in the last few years only one development direction of the national electoral systems was inherent in one or other degree practically for all democratic states viz. the automation (modernization) of their electoral systems, by using hardware at all election campaign stages, and the first and foremost being e-voting.

ELECTRONIC VOTING

The development of information and communications technologies to a large extent defines social and political development of each state. The use of new information technologies in the state and municipal sector, science, education, health induces the governments, inter-state and international organizations actively implement them in practice of state and political management. One of the prospective lines of their use is development of e-voting by voters.

For the first time the term "electronic voting"[3] (electronic (al) voting – e-voting) was introduced in 1960s, when voting using paper ballots were in use all over the world. The new concept implied that the expression of will by the voting electorate is expressed using electronic means. The use of internet and telephone for voting began to be discussed in the 1980s only, but these means were not supposed to be used in the general elections or referendums due to their poor information security[4]. For the first time system publications on the topic of electronic elections appeared in 1981 and for the first time the experimental steps in this direction were made just 10 years ago[5].

Electronic voting can be conducted at the polling station using: paper and electronic voting system (optical scanning system), voting system with direct recording (direct recording through sensor display or push-button terminal).

Remote voting is an independent form of e-voting (without the voter's presence at the polling station) using public use information and telecommunication network internet (hereinafter referred to as internet voting) or other communication channels (for example phone line, mobile phone connection).

As per the recommendations of the Committee of Ministers of countries-members of Council of Europe for legal, organizational and technical standards of electronic voting, adopted in 2004 by the Commission on issues for development of electronic and remote voting under the Committee of Ministers of the Council of Europe, the main advantages of voting through internet are:

✓ Guarantee voters the opportunity to vote not only at the polling station of one's electoral district, but at another place;

✓ Secure participation of all citizens, having voting right, in the elections and referendums, and in particular overseas voters;

✓ Widen access of voters with limited physical capabilities or those, who due to some reason cannot be present at the polling station, to the election process;

✓ Raise voter turnout by providing additional channels for voting;

✓ Bring voting process in conformity with new social realities and enhance use of new technologies as means of communications;

✓ Reduce overall expenses of elective bodies for holding elections or referendums in due course;

✓ Enhance operational efficiency and reliability of transferring voting results.

In addition the experts in elections and internet technologies report several problems, associated with introduction of e-voting:

✓ Technical complexity of internet voting procedure;

✓ Impossibility to provide universal access to the channel for remote and e-voting;

✓ Possibility of voting through more than one voting channel;

✓ Possibility of establishing connection between the polled vote and specific voter (breach of secret ballot);

✓ Difficulty or impossibility of additional vote recount;

✔ Possibility of data fraud and/or unauthorised interference into system operation;

✔ External attempts at blocking access to system services;

✔ Complexity of control and monitoring on the part of the public[6].

The challenges were also fixed in the recommendations of the Committee of Ministers of the Council of Europe, concerning legal, organizational and technical standards of e-voting.

The governments of member countries are recommended in those cases, when they already use or consider the possibility of using e-voting, to observe the standards and requirements on legal, organizational and technical aspects of e-voting in that form, in which they are stated in the annexes to the recommendations of the Committee of Ministers of member countries of the Council of Europe.

At present many countries dynamically develop national e-voting projects, including internet voting. Whereas international experience shows that in order to implement and effectively use internet voting long and coordinated work of states, civil society, expert community for overcoming technical, organizational and legal problems, arising on the way to implementing such voting method is required.

INTERNATIONAL MONITORING OVER E-VOTING

The use of voting hardware, including electronic voting, became the subject of special attention of international organizations, acting in the human rights sphere. Thus, the Office for Democratic Institutes and Human Rights of the Organization for Security and Cooperation in Europe takes note in the Manual for monitoring elections on that that some states-members of OSCE implemented new technologies, automating the voting processes and counting of votes

A whole series of electronic technologies, including electronic equipment for direct recording of information to database (DRE), voting ballot scanners, Internet and mobile phone communications network is used.

The new election technologies, using electronic equipment, offer considerable potential advantages. They include the opportunity to increase voter participation in the voting; opportunity to organize voting in remote areas (for example, for voters, located abroad); simplification of the vote count procedure; acceleration in disclosing the election results; improvement of the access to voting to handicapped voters or for persons, speaking in minority languages.

In addition, such technologies raise the issue of ensuring transparency of election process and on observation of secrecy of voting; they can change the perceptions about the protection level of voting process and thereby negatively manifest itself on the voters' confidence level to elections. Therefore it is important to assess the results of implementing the electronic voting system by the given participant state, and define, how it shall manifest itself on the possibility to monitor the voting process.

The use of electronic technologies shall correspond to principles, vested in the obligations of OSCE and in other international standards in the sphere of democratic elections, and shall provide the same guarantee of transparency of elections, and trust in them from the population, as the traditional voting methods. The experience of countries, which have implemented electronic voting, shows that the following measures have important significance from the point of view of observing the specified principles and enhancing society's trust to the new election technologies:

✔ Transparent certification procedures of equipment for electronic voting and reporting about certifi-

cation results;

✓ Permission to conduct complex independent testing of equipment for electronic voting by qualified citizen, scientific institutions or civil society groups.

✓ Legal documents, notifying the probable conflict of interests with suppliers of equipment for electronic voting;

✓ Possibility for creation of permanent paper record confirmed by the voter and is manually verifiable, and clear rules, defining, when such verifications shall be made.

✓ Possibility for conducting mandatory, statistically correct manual recount of paper ballots with the purpose of detecting probable inconsistencies;

✓ Clear division of sphere of liability between the equipment supplier, equipment certification body and elective bodies for the purpose of ensuring complete accountability and effective reaction in case of possible equipment failure.

ODIHR observers do not conduct certification of electronic voting systems. However they shall have access to the certification process and independent internal check of equipment for electronic voting, including to the reports of certification bodies and supervising persons. The mission for monitoring elections shall also pay attention to the criteria, applied by elective bodies in selecting the electronic voting system, and method of implementing these systems. It is required to study the regulatory framework, system for informing electorate and results of equipment trial. The observers shall also have the opportunity to get acquainted with the electronic voting systems, including with voting result processing process.

The use of electronic voting technologies in the uncontrolled medium (for example, voting through internet) involves additional problems, connected with ensuring security and secrecy of the voting process, and possibility of monitoring this process. In spite of the facts that in such cases the mission for monitoring elections ODIHR OSCE can monitor several aspects of this process, it hardly can effectively monitor the voting process at large, and cannot be able to arrive at the conclusion regarding its fairness.

The potential issues to be paid attention to in the opinion of ODIHR OSCE include:

✓ Lack of appropriate regulatory framework;

✓ Electronic voting system that does not stipulate the possibility for the voter verifying his vote in paper format or other means of manual verification of the voting results;

✓ Absence of access to the initial code;

✓ Disbelief in the electronic voting equipment from the population;

✓ Insufficient training of officials, responsible for conducting elections;

✓ Absence of information for electorate;

✓ Non-transparency of certification process;

✓ Absence of sharing spheres of responsibility between the equipment suppliers, certification bodies and elective bodies;

✓ Lack of clear recommendations or rules in case of equipment failure.

# DEVELOPMENT OF ELECTRONIC VOTING SYSTEMS IN DIFFERENT STATES OF THE WORLD

Russian Federation

Russian Federation along with other countries with developed information and telecommunications structure actively develops modern information technologies in organising and holding elections.

In our country in accordance with the Federal Law of January 10, 2003 "On state automatic system "Elections" for automation of the election process SAS "Elections: is used, as well as vote counting hardware - complexes for pro-

cessing ballots (KOIB[7]) - optical scanning system, automatic reading of information from paper ballot, and e-voting complexes (KEG) - direct record system through sensor display (without use of paper ballot).

The practice of using the specified hardware showed that when voting using them the electoral rights of citizens are duly ensured and secrecy of voting is preserved. CEC Russia puts the task for providing such devices in big cities polling stations with large number of voters.
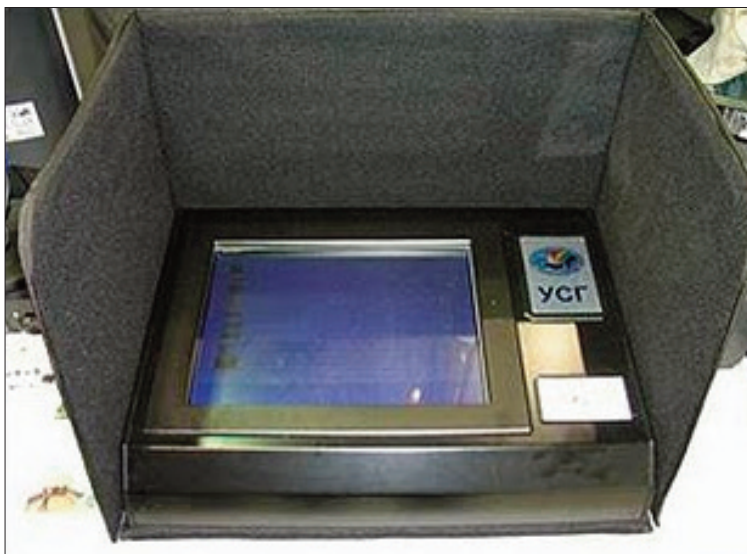
KOIB has often been used in the elections in many regions of Russian including Leningrad Region (from 1996 to 2007, during the six election campaigns of various levels)

On October 10, 2010 the complexes for processing ballot papers viz. Optical scanners, reading information from the ballots, were for the first time used so extensively in our country in 22 constituent entities of the Russian Federation (more than 3,000 units that is sufficient to equip 1,500 polling station). Till the end of 2012 it is planned to provide 15 percent of polling stations in Russia with the corresponding devices and by 2015 this index to be increased up to 70%, leaving only the polling stations with small number of voters unequipped with such device.

After the first use of KEG during the elections in 2006 to the regional Duma in Veliky Novgorod they were improved, and at present each such device includes a mini-printer, and the voter can see confirmation of his choice on each ballot on the fiscal **tape**. If required the tape can be opened and vote count made manually. As a consequence of the modernization the complex can operate in autonomous mode from 6 to 8 hours that in case of probable disruption of power supply at the polling station, shall secure e-voting from the time of opening to the time of closing.

Mikhail Popov, Director of the Federal Center of Information Technologies under CEC Russia notes: "In March 2007 in the city of Orel during the elections to the Orel Regional Council of Peoples' Deputies we checked the validity of results in five polling stations by comparing the results of e-voting with copy on paper **tape**. All the opposition parties and public organizations, who participated in the election campaign, were present at the comparative check procedure. The comparative check results showed absolute coincidence of e-voting data and data, printed on the **tape**".

Among the advanced technologies also are the use of global navigation satellite system GLONASS and satellite communication system "Gonets" (in this connection a Cooperation Agreement was signed between the Central Election Commission of the Russian Federation and Federal Space Agency), as well as web-cameras at the polling stations and other hardware.

Vladimir Churov, Chairman of CEC Russia notes: "It is expected that gradually all the polling stations shall be equipped with automated work station, on which the final reporting protocol shall be formed. Information from KOIB or KEG shall be directly entered to the automatic work station. These protocols on them shall be signed by electronic digital signature of the chairman and secretary of the polling station commission and sent to the superior commission. When this shall be executed we can get protocols directly from the polling stations. They shall begin to be sent simultaneously to the territorial election commission and to CEC Russia. This is a vital task, which resolves all issues, for example, with copies of protocols. This shall also considerably simplify and make document transportation cheaper"[8]. In this case he notes that the optical scanner (KOIB) are expensive, as the paper ballot is preserved; KEG can recover costs after some time, as the expenses for preparing and transportation of paper ballots are excluded. Remote voting gives economic effect primarily at the cost of reducing transportation costs, reduction in overall expenses for securing voting at the polling station.

In conformity with the election law all the protocols of the polling station commissions on voting results shall be hosted on the websites of CEC Russia and election commissions of the constituent entities of the Russian Federation within one day after end of the voting time.

The first experience in using internet technologies in domestic election practice was the experiment on voter e-polling during the municipal elections held on October 12, 2008 in the city of Novomoskovsk, Tula Region. Compact discs were used for the voter e-polling experiment. During the single voting day March 1, 2009 the voter e-polling experiment using internet was conducted at once in several regions of our country. Compact discs were used in the Volgograd, Vologda, and Tomsk Regions for conducting voter e-polling. In Khanty-Mansiysk Autonomous Region – Yugra the experiment was conducted using electronic Social Card, and in the Vladimir Region using mobile communications[9].

Electronic voting (remote e-voting, including using internet) provides voting opportunity to Russian citizens living abroad. They represent sufficiently large group of voters: As of July 1, 2009 more than 1,650,000 voters, having voting rights, were abroad, though usually 200,000 - 250,000 vote[10]. In the elections of deputies to the State Duma of Federation Council of the Russian Federation in 2007 opened were 350 polling stations in 140 countries of the world, in the elections of the President of Russian in 2008 - 364 (for example, in Israel for 130,000 voters 11 polling stations were organized). The polling stations are often opened only at the embassies and consulates which are not always convenient for voters, especially in big countries, where our nationals can live at a considerable distance from the embassy or consulate. With the help of internet voting more than one million voters abroad can be covered. This type of voting is required for the voters, located in our country in hard-to-reach and remote areas,

"If we shall not introduce internet voting, about three and half million young people, according to sociologists, shall never come to the polling stations. This is not laziness but this is principle. They say that they shall vote only through internet. We cannot afford to lose three million voters" - emphasised Vladimir Churov, Chairman of CEC Russia in the interview to the radio station "Voice of Russia"[11].

The continuation of dynamic assimilation of information technologies when organizing and holding elections in our country was the experiment on e-polling of voters using internet through mobile connection in Kingisepp, Leningrad Region. The poll was conducted on the day of voting to the local self-governing bodies on October 11, 2009.

Among the important factors, influencing the choice of place for conducting the experiment, it should be noted about the averaging of the main electoral parameters of this territory in the scale of Russia, and average sophistication of computer networks and proportion of internet users[12].

More than 60 percent of the number of voters in the city of Kingisepp who participated in the traditional voting became participants of the experiment. As shown by the results of the sociological study conducted, 85 percent of the voters regarded the experiment as positive. As per the study data the information awareness of the population about the experiment constituted 75 percent. At the same time the citizens named TV (50%), newspapers (37%), campaign materials (27%), information from volunteers-campaigners (25%) as the main source of information.

The experiments on use of web-cameras, allowing internet broadcast of voting in the voting premises in real time, were conducted during the regional elections that were held in 2008–2009 in several constituent entities of the Russian Federation.

By decision of the Election Commission for Leningrad Region web-cameras were used during the

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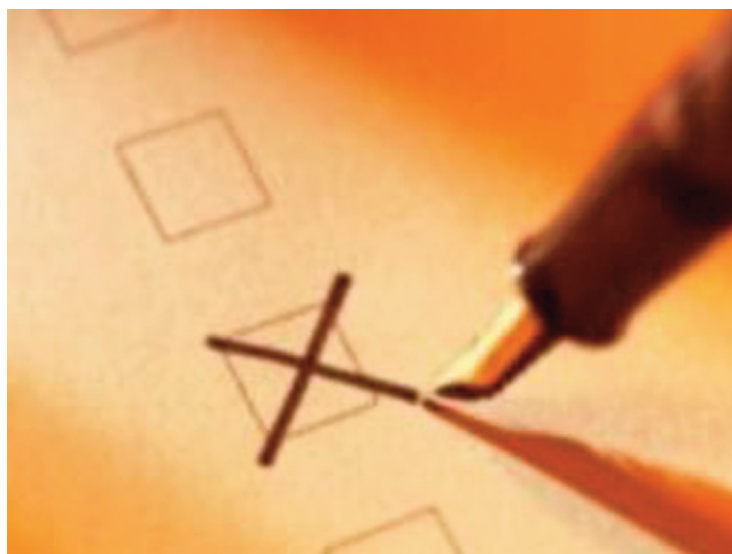
by-elections of the Members of Legislative Assembly of Leningrad Region for Priozerksky and Kirovsky single member constituencies, which were held on October 10, 2010. The web-cameras were installed (in six polling stations) thus, so that their use could not breach secrecy of ballot viz. the internal space of the voting cabin did not come in the camera's field of view. The access of internet users to video information, translated by web-cameras, was organized at the website of the Leningrad Region Election Commission (www.leningrad-reg.izbirkom.ru). The website of Leningrad Region Election Commission was visited 460 times on the voting day, and more than 4,000 pages were opened. Overwhelming majority of the visits was registered from Russia (St. Petersburg, Gatchina, Priozersk, Kirovsk, Moscow, Ufa, Yekareinburg, Perm, Chelyabinsk and other cities), and visits from Estonia, Finland, Republic of Moldova and even USA were registered.

The conduct of video broadcast on the voting day from the voting premises assists in considerably enhancing trust of voters, candidates and public unions, representatives of mass media to the voting process and its results, represents additional form of monitoring the situation at the polling stations on the voting day and prevents breach of election law. (In fact, the author of this brochure, as the official observer from the Executive Committee of the Confederation of Independent States, was the witness to how in the elections of the President of the Republic of Azerbaijan in November 2008 web-cameras were used at the polling stations. The Chairman CEC Russia, V.E. Churov had announced in public then about the expediency of using this experience at the elections in the Russian Federation).

CEC Russia by 2011 plans to equip every tenth polling station in the country with web-cameras[13]. Therefore the experience of using web-cameras by several election commissions of the constituent entities of the Russian Federation during the voting and summarizing its results can become the practical support for development and further spreading of this technology.

At the same time the election commissions of the constituent entities of the Russian Federation pay attention to the necessity of timely resolution of individual issues, connected with the specified prospective. The election organizers concur that the use of web-cameras when covering the work of election commissions during the Federal elections shall be substantiated by the norms of Russian law, have integrated software, clear organization of security system for user access to video information, transmitted by web-cameras, and supported by the corresponding financial and material security[14].

Moreover, on the single voting day October 10, 2010 during the by-elections of the deputy of the Legislative Assembly of Leningrad Region for Kirov single mandate electoral district the system of satellite navigation monitoring system GLONAS was used for the first time at the elections in Leningrad Region. Eleven automobiles transporting election documentation, and departing to the voters for voting outside the voting premises were equipped with subscriber telecontrol terminals, operating on the basis of satellite navigation monitoring technology.

A dispatcher center was organized at Leningrad Region Election Commission, where all information about the movements of vehicles, equipped with GLONASS terminals, in Kirovsky municipal district were received. The vehicle displacement was displayed on the monitor. The review data about the vehicle displacements included: Time of departure and arrival at a specific point, speed, and kilometres travelled and traffic route. The GLONASS system allows fix any deviation from the earlier intended traffic routes and instantly transfer information about them to the dispatcher center in the form of alarm messages. Own dispatcher center was set up at the territorial election commission of Kirov municipal district.

In his State of Nation Address in November 2009 the President of the Russian Federation D.A. Medvedev assigned the Government of Russia, Central Election Commission, constituent

entities of the Russian Federation to prepare the program of accelerated modernization of the country's electoral system. A Working Group was formed at CEC Russia for implementing all the ten points of the President's Address, which concern the election system. The tenth point touches upon one of the burning issues for election organizers viz. about the accelerated technical re-equipment of the electoral system. "Implementation of electronic equipment for counting votes and processing information at the polling stations shall assist in the struggle with abuse during election campaigns. It is necessary to make the electoral system more transparent at the regional level. I assign the Government together with the Central Election Commission and executive authorities of the constituent entities of our country to prepare the program for accelerated technical re-equipment of election system", - it is noted in the Address[15].

The main purpose and tasks of the program are: enhance the openness of the election system at the regional level, broaden the opportunities for exercising constitutional electoral right of the Russian Federation citizen, broaden the possibility of public monitoring of the electoral process and voting results, development of the electoral process as part of the national structure of information space of the electronic society of the Russian Federation, excluding negative influence of human factor on the voting process and results, including at the cost of implementing electronic vote count and information processing equipment at the polling stations.

CEC Russia had within the established period presented the Government of Russia its suggestions to the program for technical reequipment of the electoral system.

The principal condition for further accelerated technical reequipment of the electoral system is regular and all round information of voters by the election commissions of the constituent entities of the Russian Federation about the new technologies, which are introduced or shall be introduced in the election process. As shown by multiple sociological polls, conducted during the experiments, considerable influence on the voter participation in the experiments was made by the information awareness of citizens about these experiments.

The official introduction of internet voting in the election practice of foreign countries, as a rule, was accompanied by preliminary sociological research, directed at finding out the readiness of various population groups to use internet as the voting channel. In Russia a large-scale all Russian poll was conducted, which obviously confirmed the identical nature of the relation of Russian voters to introduction of internet voting with that prevailing in other countries. Thus, as per the public interest poll, conducted by VCIOM (Russian Public Opinion Research Center) in September-October 2008 on federal sampling, a third of Russians (34%) as such regard the idea of internet voting as positive. Half of the citizens (48%) negatively regard such novelty. Similar data concurs with the poll results, conducted in 2007 in Austria (a country that did not practice e-voting in test mode). Here during the poll 35% respondents declared that they are ready to vote on the internet, and 58%, that they do not want this.

One more sociological poll was conducted among the voters, taking part in the experiment in the city of Novomoskovsk, Tula Region. Thus, 71% regarded positively to internet voting and less than 10% negatively. However, it is worth noting that these results were obtained after conducting a complex of awareness measures among the voters. Similar figures were got during the conduct of experiments in five constituent entities of the Russian Federation on March 1, 2009.

Thus, data of foreign and domestic sociological polls allow assert that use of internet voting as additional method of expression of will by citizens does not invoke citizens' sharp negative reaction. Moreover, the use of internet as additional voting channel, even in experiment mode, assists in growth of citizens' confidence to the elections and their electoral activity.

The condition of further activity for implementing, development and improvement of internet voting system shall be the successful resolution of several issues of principle. Primarily this is technical operation and reliability of the system, which shall be protected from probable viruses, unauthorized entry into its operation. In the political and legal aspect the issues of guaranteeing secrecy of ballot, statutory control of internet voting procedures, protection from manipulation of voting results, and citizens' perception and trust in such form of voting. In the following experiment development stage the development of regulatory and technological basis of the remote form of e-voting at the Federal level, in the preparations for 2011-2012 elections is possible.
At present the draft law on implementation of such type of voting is considered by the State Duma. If it is adopted it shall be possible to hold real remote e-voting and not an experimental one.

France

The election code of the Republic of France permits electronic voting from 1969. In 2003 the French Interior Ministry adopted the document, containing the list of technical requirements for certification of electronic voting complexes, which are used without paper medium.

The decision to use electronic voting complexes is under the competency of commune with the subsequent approval by the prefect that weakens the uniform approach to their use and monitoring them.

The municipalities deploy demonstration points for informing the voters about the use of electronic voting that are dedicated to the operation of electronic voting complexes, conduct their public testing, when the voters can practice in handling the automatic voting devices, create websites for training voters etc. For voters with poor vision the electronic voting complex stipulates sound accompaniment.

In France the electronic voting complexes were first used at the regional and local elections in 2004, then at the parliament elections in 2006 and presidential elections held in 2007, when 1.5 million voters (3%) from 83 cities used electronic voting.

When holding the elections of the President of France in 2007 several non-governmental organizations expressed doubt in electronic voting, several political parties were against its use at the presidential and parliament elections (they declared that the waiting time in queue for electronic voting constituted up to two hours and many voters left without waiting, and the testing of two of the three types of automatic machines showed that four persons out of seven in the age of 65 years and above could not vote, using the given machines). The Constitutional Council of France confirmed the legality of using the complexes for electronic voting.

Internet-voting is used for citizens, located abroad (about 800,000 people) since 2003. No more than 2% of those who have right to this actually vote through internet.

USA

Federal Law of 2002 "Help America Vote (HAVA)") stipulates that since 2006 all the polling stations shall be equipped with electronic voting system, with the exception of several states, where for example, all the voters vote by post[16].

Whilst in the territories of several municipal formations in the states of New York and Idaho lever-type and "perforation" machines for voting are used, in some polling stations in 10 states paper electoral ballots are used and the procedure of their manual count is applied. One of the main drawbacks of HAVA and accordingly the American system of electronic voting is the absence of universally binding Federal Standards of electoral technologies and unified equipment certification system.

At present 18 states of 26, using sensor voting hardware, adopted legislative provisions that the e-voting complexes shall be provided with paper media (in 9 states sensor e-voting complexes are the only means for voting). The state Maryland was the first state to use sensor complexes for e-voting. However, as informed by Russian observers, monitoring the mid-term elections to the US Congress in autumn 2010, the voters from Maryland insisted on replacement of the machines with sensor displays by optical scanning machines, as they consider it necessary the availability of paper ballot for avoiding falsification[17].

In 41 states optical e-voting complexes are used (along with sensor e-voting complexes), including 17 states, where they are used at all polling stations. On the whole 93% of voters take part in the voting suing e-voting and vote counting machines.

The first experience of internet voting was in the US Democratic Party primaries in the state

of Arizona in March 2009. In February 2008 internet voting was organized at the primaries for voters-democrats, living abroad.

Voting through internet is applied only in the county of Okalooza, state Florida.

Great Britain

In 2002-2005 large-scale tests of e-voting systems were conducted. In 2002 in several districts voting through internet was permitted (from home computers) and mobile phones (through sms). The main reason was the desire to attract youth for participation in the elections. In the municipal elections in Liverpool it was experimentally permitted to vote through internet, by mobile phone or ordinary phone.

Electronic vote counting devices were used in the elections held on May 3, 2007 to the parliament and local self-government of Scotland (Swindon County). The voters could vote by phone, through the internet, being at home, at work place, in public libraries or from any of the 300 portable computers, located at 65 points all over the district[18].

Since 2000 in Great Britain more than 150 projects for using e-voting in 100 districts were executed, 6.4 million voters were covered, 17 centralized e-voting projects viz. internet kiosks, interactive TV, telephony, sms messages were implemented. 14 projects included use of internet: voting from any computer using personal password, received simultaneously with the voting card.

Germany

In the Federal Republic of Germany in the elections to Bundestag in 2005 about two million voters in 30 polling districts made use of e-voting system (1,800 machines). However, after these elections there arose fear regarding ensuring electoral rights, including secrecy of voting, during e-voting and use of voting and vote counting hardware.

In March 2009 the Constitutional Court of Germany, considering the law suit by the political analyst J. Visner and his son, employed as programmer, acknowledged that use of e-voting machines, made in the Netherlands, in the general elections in 2005, violated the German election law, e-voting does not meet the principles of honest and open elections. Detailed verification of the complaint with the participation of the largest society of hackers in Germany Chaos Computer Club as experts showed the rightness of resorting by the Visners father and son[19]. Moreover, the use of Dutch e-voting machines gave rise to unfavourable criticism of several voters - they were unsatisfied that after pressing the button it was impossible to see, whom the vote "went" to.

By court decision the citizens of the country in the elections in September 2009 voted using paper ballots. Meanwhile this court decision does not imply total ban on e-voting, but is related to the current generation of such machines.

In Germany a national law on testing equipments for e-voting has been adopted, and about 30 remote e-voting tests were conducted, mainly at private companies, corporations.

Sweden

In Sweden there is relatively moderate interest for implementing electronic form of voting in the electoral practice. In Sweden the voter turnout at the elections is very high; therefore several Swedish experts fear that the electronic voting can destroy the existing stability of traditional electoral system, whose work is assessed as positive.

The committee that was formed for consideration of the concept of new electoral law in Sweden in its final report that the forms of electronic voting are not advisable to be implemented in the general elections at present. This committee, in particular, specifies to the existence of a series of issues, arising in relation to observation of secrecy of voting, falsification of voting results, and on the problem of abuse under political influence. But the most important is the problem of security, connected with the technological side of the issue. The further implementation of the electronic voting system in Sweden was terminated. This is certified by information from official publications of the Swedish Election Commission[20,21]. At the elections in Sweden only special voter identification cards, sent by post, are used. The voting itself is carried out using ordinary paper ballets[22].

Finland

In Finland the voting and electoral ballot counting hardware is used only at the municipal elections in experimental order without confirming paper medium. The voter is provided the opportunity to vote using paper ballot or using the complex for electronic voting. Electronic voting stipulates the voter to enter only the number of the candidate, for whom he votes, to the monitor screen.

On January 1, 2007 a temporary regulation on use of electronic voting at the municipal elections was adopted. Its validity expired on December 31, 2008. At the municipal elections held in October 2008 at three municipalities using the complexes for electronic voting 57.2% of voters (voting by absentee vote) voted.

The prospects of further development of electronic voting in Finland were discussed under the meeting of the Ministry of Justice, Finland in January 2010. The Ministry by its resolution decreed that the development of electronic voting forms at the polling stations shall not be continued.

The Ministry of Justice, Finland developed a Memorandum on the results of experiment conducted on electronic voting, where in particular it is said that "electronic voting as such does not reduce the volume of work of elective bodies" and "electronic voting as such does not influence the turnout figures"[23].

Norway

The first experiments on use of electronic devices for voting were conducted at the municipal elections in three regions of Norway (Oppda, Hovden, and Larvik) on September 15, 2003. The experiment in the region Longyearbyen was conducted on October 26 and 27, 2003. The voting was held at the polling station using the so called "valgomater", i.e. using electronic boxes for voting, which appeared similar to ATM terminals.

In 2004 the Ministry for Local Self-governance and Regional Development formed a working group for studying the possibility of use of electronic voting. The result of the work conducted in 2006 became the report, specifying the possibility (after elimination of serious disadvantages of the technological base) of introducing electronic voting. In particular, internet voting is proposed to be used only after voting by absentee vote. In 2009 the Ministry held a tender for selecting the developer of internet voting system and signed a contract for setting up internet voting system, comprising of unified automated information provision system for preparation, conduct and summarizing all the elections in Norway. In 2011 it is planned to hold pilot elections in 9 municipal districts using the internet voting system being created. According to the results the decision shall be taken about the use of the system on a national scale[24].

Canada

Electronic voting at municipal elections are used from the middle of 1990's. The first internet voting was held in 2003 during the elections of the head of the New Democratic Party. During this voting there were serious failures of communications through internet, caused by virus actions. The electorates could not register in the voting system almost for the whole day. When the problem was resolved, it was found that the time, allotted for voting had ended 45 minutes earlier. Nevertheless, the results of the elections were acknowledged as legitimate. Apart from the electorate, the bank clients in Toronto, who tried to withdraw cash from ATM's, experienced difficulty.

In 12 municipalities of Ontario province since 2006 the private company CanVote ensured internet voting of about 100,000 voters using the system, based on using identification numbers and passwords.

Belgium

In Belgium the law "On organizing automated (electronic) voting" of April 11, 1994 is in vigor. At the elections in 2007 out of 7.7 million registered voters 91% had voted. It is worth noting

that the participation in the voting is compulsory for Belgian citizens (since 1893). According to the local law non-participation in the elections without reasonable excuse is punishable by fine.

At these elections 44% of the voters took part in the voting using voting machines. It is noteworthy that the elections started at 8 hours in the morning and continued to 13 hours at the polling stations that used paper ballots, and until 15 hours at the polling stations that used electronic voting system. Such short duration work of the polling stations on the voting day is a special feature of the electoral system in Belgium and is connected with that the remaining time is spent for counting the votes. According to the messages by local media there were about 400 cases of technical problems with electronic voting.

Italy

In Italy at the parliament elections 2006 the procedure of electronic counting of electoral votes in four regions at 12,680 polling stations was carried out in experimental order. At the early parliamentary election in 2008 electronic voting was not used.

Spain

In 2004 the law on electronic government for Basque Autonomy, containing the provisions on electronic voting was adopted in Spain[25]. At the referendum in February 2005 from among 2 million voters (in 52 municipalities) about 10,000 citizens used internet voting.

Switzerland

In Switzerland the legal framework for using electronic voting was created on June 21, 2002 in the context of partial revision of the Federal Law of December 17, 1976 "On political rights".

This law allows the Federal Council, after having consulted with the concerned cantons and municipalities, conduct experiments on electronic voting. The cantons[26], where the experiments were conducted successfully without failures, in the course of long period of time, can send request to the Federal Council for conducting electronic voting in future. The Federal Council can cancel conduct of electronic voting at any time, independent of the place, time or issues, put up for voting. The check of permit to voting, strict control of secret voting and record of votes, and prevention of abusive practices shall be guaranteed. The Federal Council shall monitor the conduct of similar experiments. Moreover, the above specified Federal Law of Switzerland consolidates the provision that in case of conducting experiment on electronic voting each canton shall define the rules for counting voting and basis of voidance by adopting the corresponding law.

At present the Federal Council had adopted a resolution on gradual dissemination of electronic voting in all the cantons.

The citizens of this country resolve all important issues at referendum: On transport management and support of casino activity, on prohibition of atomic weapon, on protection of natural landscape and on the measures for environmental protection, on alcohol abuse prevention, on fair taxation of heavy postal parcels. The Federal and cantonal (regional) referendums are held every two years.

In 2004 a referendum was held in Switzerland using electronic voting. Then more than 2,700 of 22,000 voters, residing in the suburbs of Geneva, voted in on-line mode.

Australia

In 2000 amendments to the law of 1992, stipulating use of e-voting systems when holding general and municipal elections (Act on Election 1992), were adopted here. The e-voting system was used for the first time in the parliament elections in October 2011 and used again in the elections after three years.

During the voting procedure ordinary personal computers were used as voting terminals (points). Almost 10 computers with monitors were installed at each polling station for all the voters and several computers for handicapped people (with large screen monitors). The blind could vote without outside help, by hearing the special instruction audio recording, recorded in 12 languages. In this case, the voter when coming to the polling station could choose the method of voting: using electronic equipment or using paper ballot.

In contrast to the practice in USA, printing copies of vote polled through computer is not stipulated in Australia. This is considered an unnecessary measure. The Australian e-voting system includes sound output using computer, but electronic counting of all polled votes.

Since 2004 the parliament committee on elections had been engaged in the preparation of the required regulatory framework for e-voting by servicemen, serving abroad, and for blind and visually impaired voters. In 2007 the corresponding law was adopted and in the autumn of the same year this type of voting was used in the parliament elections. It should be noted that the corresponding law was adopted only as applicable to 2007 elections.

Estonia

When introducing internet voting in Estonia the fact that internet is used by more than 63% of the population in the age 25-40 years was taken into account. Thus, in Estonia the e-voting procedure is consolidated in several regulatory legal acts: Parliament Election Law of June 12, 2002, Europarliament Election Law of December18, 2002, Election Law to local self-government bodies of March 12, 2002, Referendum Law of March 27, 2002. The basis of internet voting system in Estonia is the use of personal identification document (domestic identification document, mandatory for citizens, having attained 15 years of age, allowing to put electronic signature).

In accordance with the above stated regulatory legal acts one can electronically cast vote on the website of the Republican Election Commission during the days, stipulated by law (voting starts six days to the date of elections at 9.00 and continues round the clock and ends four days in advance to the date of elections at 20.00).

By e-voting the voters can change his choice unlimited number of times, in this case the last choice made is the one and only that is taken into account. At the same time the vote, polled using paper ballot is final and annuls all internet votes, cast earlier by this voter. In the opinion of the Election Commission of Estonia that fact that the voter can cast his vote repeatedly, lowers the stimulus for coercion or bribery, as any person, who tries to resort to such measures, cannot be sure that the vote cast under pressure or influence, shall in reality be the last vote cast by the voter.

After the end of e-voting the Republican Election Commission at the end of voting makes the list of persons voting by electronic means at the polling stations, and transfers them to the corresponding district election commissions no later than two days in advance to the elections, referendum. The district election commission transfers the lists to the corresponding precinct commission no later than the day preceding the Election Day.

Internet voting was used during the voting by absentee ballot in the elections to the local self-governing bodies in 2005. Nine thousand voters voted using internet (total number of voters 940,000).

Internet voting in the elections to the Parliament of Estonia (Riigikogu) in 2007 became the first in the world and in Europe case of using internet at a national level as the method of voting in the parliament elections (such form of voting was preferred by 3% of voters).

In the Recommendations of his special Report for the Council of Europe "Internet voting in March 2007 at the parliament elections in Estonia" the Director of the European Union Democratic Observation (EUDO), Professor Alexander Tretchsel and his colleague from Florentine Institute of the European University Robert Schuman pointed that the "Estonian e-voting system was not subject to complex certification procedure until then".

According to international observers from ODIHR/OSCE specific improvements in legislation could have been made regarding internet voting. The law of elections in Riigikogu does not contain provisions, regulating guarantee of internet voting system security, and it does not stipulate responsibility of any body, like the specific basis for sanctions in case of failure of the system are not defined[27].

The Netherlands

The Decree of October 19, 1989 on voting using sensor type electronic machines is in effect. In 1999 in the Netherlands the implementation of the project for studying the possibilities of remote electronic voting started. This project was mainly meant for voters, who are abroad and were considered as the ideal test group for this type of e-voting. Until 2004 almost all Dutch citizens, living abroad, could vote only by post, through proxy holder or personally at the polling station in the Netherlands.

The law on experimental voting in real time mode (came into effect in December 2003) allows vote at any polling station within the limits of the territory of municipality, and from abroad for voters, living abroad. This law allows vote both on the internet and by phone. The voting on internet is held 4 days in advance to the date of official voting.

The experiment was conducted during the elections to the European Parliament in 2004, during which the voters, living abroad, could voter through internet or by phone. Its results showed that the voting through internet was on the whole successful; at the same time the opportunity to vote by phone was used only by a small group of voters. Therefore it was decided to abandon the "phone" method, and develop internet voting in thereafter.

During the municipal elections in 2006 internet voting was again tried and again successfully. of the 34,305 registered voters abroad 21,593 voters (63%) applied for voting through internet. Out of them 19,815 people (92%) in the end used this type of voting. The voters were offered to fill on-line applications to find their opinion about the success of experiment. As a result 11,003 people (65%) answered to this questionnaire. Out of them 99% preferred voting through internet over postal voting. 94% wanted that the government introduced internet voting on a permanent basis.[28]

In 2005 in the Netherlands there were two main suppliers of voting machines: "Nedap" and "Sdu".

"Nedap" produced machines with displays, sufficiently big to accommodate all the candidates on it. They were one of the first corporations in the Netherlands, producing such equipment and supplying them approximately to 90% of the municipalities. They as well operated in other countries.

The machines, produce by "Sdu", were smaller in size, and sensor display was used in them in lieu of push buttons. Voting using these equipments was performed in two stages: in the beginning the voter selects the party, and then the candidate from the list. "Sdu" did not sell the machines to municipalities, and only leased them during the elections. The main difference was the machines "Sdu" had GPRS connection, which was used after closure of polling stations for sending the results to the municipality.

During the elections in 2006 in one of the municipalities the candidate polled 181 votes in one of the polling stations; at the same time in all the other places taken together he got only eleven votes. He was an employee of the same polling station and had access to voting machines that immediately arouse suspicion. However, "Nedap" equipment did not have the technical capacities for checking and recounting votes. The district attorney was compelled to call all voters, who voted at this polling station, to testify. After which it was found out that the suspicious candidate had polled only nominal number of votes. He was accused, however the first instance court acquitted the suspect due to lack of evidence. Thereafter the district attorney contested the decision at the Court of Appeal, which adjudged all the grounds sufficient for convicting the accused for fraud.

The civic movement "We do not trust electronic voting" was organized. In order to prove their point of view the representatives of this movement could "break" "Nedap" equipment and upload software there that makes it possible to change the election results. In March 2007 the initiative group declared against approval of "Nedap" equipments. Based on the results of the action proceedings on October 1, 2007 the district court of Amsterdam revoked the resolution on certification of all "Nedap" equipments for voting, which were used for voting at that time in the Netherlands. Since the certification of "Sdu" machines were cancelled even before it, there were no devices for electronic voting in the country. On October 21, 2007 the final cancellation of the Rules for approving voting machines took place. Similarly amendments were made in the Decree of October 19, 1989 that consisted in withdrawal of the Minister's authority for setting new rules of approval for electronic voting equipment. Similarly it was not needed any more to certify the new equipments. This implied that until the new mechanisms are developed electronic voting and rules regarding their use shall

not be formalised in legislation, and it is permitted to exclusively use paper ballots.

On January 30, 2008 the issue of electronic voting was discussed in the parliament. Several parliament fractions expressed opinion that it is better to vote through paper ballots than introduced new system for electronic voting in a hurry. It was decided that the elections to the European Parliament 2009 shall be held exclusively using paper ballots.

India

In 2009 in the elections for the lower house of the parliament of India second time in the history of the country (first time in 2004) voting of 714 million voters (population 1.18 billion) was held using electronic voting equipment (voting took place in 5 stages during a month). In all more than 1.3 million such equipment, operating on batteries, were manufactured.

In 2004 the electronic mechanisms that were delivered to hard-to-reach areas of India on elephants, camels, helicopters and ships, showed their effectiveness and reliability in organizing voting.

In India voter's fingers are marked by indelible ink. In 2009 another novelty was introduced, which as per the idea of the election organizers shall increase the trust in elections, as now in the voter's list near the name and surname the voter's photo is placed. It is considered that such measure shall significantly reduce abuse in the elections.

Venezuela

In Venezuela people vote using voting devices with sensor screen and printer. Almost all polling stations were equipped with such devices. The process of voting, recording and counting is made using them. Altogether more than 19,000 such machines were installed.

The referendum of 2004 and presidential elections of 2006 were held using the electronic voting devices (US make hardware).

The electronic voting system in Venezuela differs from a majority of similar devices in USA: After the voter touches the screen and ticks the relevant candidate's name, the machine prints a filled paper ballot, which is required to be cast into the ballot box. When summarizing the members of the election commission and representatives of each candidate count these ballots and compare the data obtained with the results of electronic voting.

In Venezuela the procedure for taking fingerprint impression before voting to prevent multiple voting is mandatory. At the polling stations in densely populated areas, and along the border of Venezuela the voting machines are provided with devices, reading thumb impressions of voters. In this case, the voters fear that the fingerprints allow to determine for whom one or another person voted for. However, as assured by the election commissions the machine software is set-up in such way that it shall not save the filled electronic ballot in the same order, in which the fingerprints were recorded.

Brazil

In terms of using machines for voting in the elections the experience of Brazil, a federative state, comparable with Russia by the number of citizens, having active electoral right (as of October 2002 about 115 million people) is worth noting. The electronic voting system was inducted gradually in Brazil: In 1996 it was successfully tested in the municipal elections in 57 cities, by October 2000 it began to be applied in the municipal elections all over the country, and on October 6, 2002

it was used in the general elections of the head of state.

On October 3, 2010 the elections of the President of Brazil, governors of all 27 states of the country, two third strength of senate of National Congress, full strength of the deputy chamber of the National Congress were held, and the deputies of the representative bodies of the Brazilian states were elected. The voting process in these elections was fully computerized all over the country (no paper ballots).

At each polling station electronic equipment were installed for voting, comprising of two parts: Equipment for voter identification and electronic ballot box (cost of one electronic ballot box approximate 700 US Dollars).

The electronic ballot box is a device, consisting of a display and digital keyboard, on which the voter shall type the digital code of the candidate for each election level. In remote and hard-to-reach areas along with the electronic ballot box for transfer of data the polling stations were equipped with satellite communication equipment.

The main element of the electronic voting system, apart from the above mentioned electronic equipment, is the voter card, a document which the citizen is obliged to receive on attaining 18 years of age. Without the voter card the citizen cannot get driver license, get admitted to higher educational establishment, get pension and even get credit from bank. It is the data recorded in the voter card that allow identify the voter, find the place, where he can vote, get access to electronic ballot box and make his choice. At the same time, the specifics of Brazilian election law is the mandatory participation in the elections by educated citizens in the age of 18-70 years, at the same time from 16-18 years and after 70 years voting can be at will. Non-participation in the elections is not only liable to a fine, but the requirement to explain in writing the reason of non-appearance at the polling station for voting.

Moreover, on October 3, 2010 at 60 municipalities of Brazil an experiment was conducted for biometric registration of voters and access to voting using equipment, identifying the voter by fingerprint impressions.

As noted in his report by Konkin N.E., Secretary of the Central Election Commission of the Russian Federation, who was the head of CEC delegation for monitoring the general elections in Brazil at the invitation of the Supreme Election Court of this country, the results of the elections held on October 3, 2010 using electronic voting system were given within five hours from the time of closure of polling stations. Not a single complaint was made to the elective bodies on the voting results connected with counting of votes[29].

Philippines

In order to increase operational efficiency when summarizing the election results, announcing their official results, and for ensuring transparency of the electoral process, the Philippine Congress adopted a law in 2007 that makes it mandatory to automate all subsequent local and national elections. In order to obey this law the Philippines Election Commission chose the ballot scanning technology, which ensures quick and effective count of ballots, which are marked and manually entered into a special device.

In May 2010 in the Republic of Philippines the first elections in South-East Asia were held using hardware for electronic voting. On this day the elections of the President and 15th Congress (Parliament) of the Republic of Philippines were held and local elections at all provinces (elections of governors), cities and municipalities.

The implementation of this project was imposed on Smartmatic/TIM the winner of the tender held in June 2009. The proposal of this consortium was declared the winner both by the criteria of the best price offer and since it was the only one that completely met all the requirements set, including automation of all voting centers, providing opportunity for conducting checks from the start to end of voting, complete monitoring during the event, and opportunity to get voting results in the shortest time. Moreover, as per the requirements of the Philippines Election Commission, electronic voting hardware of Smartmatic company was checked many times and each time showed exact result.

At those elections 82,200 electronic voting hardware devices SAES 1800 (scanning device analog

of Russian KOIB) were deployed. The complete set was delivered together with uninterrupted power supply, ensuring continuous operation during 16 hours in case electricity is cut-off. The expenses on the new counting system constituted 150 million US Dollars.

Kazakhstan

Electronic voting in Kazakhstan was used for the first time in 2004 at the parliament elections. Since then the voter is provided the right to vote using special electronic devices together with the traditional form of voting.

On September 19, 2004 the automated information system "Sailau" was used at 961 (10%) polling stations when holding the scheduled elections of deputies to Majilis, Parliament of the Republic of Kazakhstan, and on December 4, 2005 at 1,447 (15%) of polling stations during the scheduled elections of the President of the Republic of Kazakhstan.

The number of participants using the automated information system was defined taking account of the technical status of the communication canals, and recommendations of ODIHR/OSCE on its gradual implementation. At the elections in autumn 2007 the AIS "Sailau" was used as well.

* * *

On the whole foreign practice in using electronic voting certify that in spite of the sufficiently serious observations many countries steadfastly continue work in the direction of technical improvement of the electoral process.

In 2008 the Expert Center on electronic voting and participation in the elections at the European Commission published the report by R. Krimmer and R, Shuster, whose main task was the analysis and comparison of the conditions for implementing electronic voting, and factors, providing the readiness to use electronic voting in 31 countries of the world, including EU and Russia, Switzerland, USA and Venezuela.

The strong positions of the Russian Federation in the list of the countries, potentially ready to use electronic voting, are acknowledged by foreign experts. In the report mentioned above the maturity level indices for use of electronic voting in Russia are practically at the same level with such countries as Switzerland, France, Germany, and Austria.

* * *

The active use of new information technologies in the practice of state and political management, including when organizing and holding elections is an integral attribute of present-day society. The use of current hardware during the elections, including electronic voting, is the attribute of any modern election system. In the near future, with the existing generally recognized international concept of organizing and conduction democratic elections, namely movement for development of voting hardware shall be the main direction in the modernization of national electoral systems.

[1] Ref., for example: Electoral legislation and elections in contemporary world. Research and editorial project authors: Lysenko V.I., Golovin A.G.

Under the general editorship of Churov V.E. – Moscow: MediaPress, 2009. - 528 pages

[2] I. Borisov. Electoral sovereignty – Moscow: ROIIP, 2010. Article 13

[3] In international practice under the term "e-voting" it is understood the application of technology of receiving and counting votes of electorate, and vote counting using any electronic means.

[4] http://www.disser.h10.ru/artical/prihodkoL4.html

[5] http://www.saferunet.ru/ruait/stories/detail.php?SECTION_ID=129&ID=675.

[6] Experimental voter e-polling using internet in the single voting days October 12, 2008 and March 1, 2009 – Moscow: RCTET under CEC Russia, 2009

[7] KOIB had been developed in the middle pf 1990's at the St. Petersburg OAO "LOMO", and software and technological application were developed by the St.Petersburg Software R&D Institute.

[8] Irkutsk Region Election Commission newspaper "Right of choice", No 18 (109), 2010

[9] Experimental voter e-polling using internet in the single voting days October 12, 2008 and March 1, 2009 – M.: RCTET under CEC Russia, 2009

[10] Here and throughout the whole text help information, hosted on the website of the Central Election Commission of the Russian Federation –www.cikrf.ru, is used.

[11] http://www.cikrf.ru/newsite/news/actual/2009/07/17/itar.jsp

[12] "Elections to the constituent entities of the Russian Federation on the single voting day October 11, 2009 Electoral statistics" / CEC Russia Moscow, 2010

[13] "Election system of the Russian Federation is being improved, remaining stable", V.E. Churov, "Magazine on elections" No 2, 2009

[14] "On the practice of using web-cameras at polling stations", N.A. Kulyasova, Vestnik of Central Election Commission of the Russian Federation, No 11, 2009 Pages 66

[15] "State of the Nation Address" Moscow; FGUP Izvestiya Publication, 2009

[16] "Election legislation and elections in contemporary world"/ V.I. Lysenko, A.G. Golovin; Under the general editorship of V.E. Churov; CEC Russia – M.: MediaPress, 2009, pages 350, 354

[17] http://www.cikrf.ru/news/relevant/2010/11/22/usa.html

[18] Experimental e-polling of voters using internet in the single voting days October 12, 2008 and March 1, 2009 – M.: RCTET under CEC Russia, 2009

[19] http://news.babr.ru/?IDE=77528

[20] Ref. http://www.val.se/valet_2010/information/713a9_engelska_att_rosta.pdf

[21] Ref. http://www.val.se/pdf/electionsinsweden_webb.pdf

[22] Ref. http://www.val.se/in_english/election_2010/index.html

[23] http://www.vaalit.fi/uploads/lng1i76rhyqju3.pdf

[24] http://www.cikrf.ru/inv/sostavcik/biografy/churov/doklad.jsp

[25] Rosa M Fernández, Esther González, José Manuel Vera. "The electoral legislation of the Basque autonomous community regarding electronic vote" // www.e-voting.cc/files/fernandez_basque_e-voting_71-83/

[26] Canton is a constituent entity of the Swiss Confederation.

[27] www.cmdp-kvorum.org/democratic-process/598

[28] Leontine Loeber. «E-Voting in the Netherlands; from General Acceptance to General Doubt in Two Years» // www.e-voting.cc/files/loeber_e-voting-in-the-netherlands_21-30/

[29] http://www.cikrf.ru/international/events/brasil_141010/index.html