Technical and Informational Support of Elections in Ukraine
Automated data-processing system “Vybor”:
development, implementation and operation features
The first attempt to use a computer system for the elections goes back to 1994. To provide informational support for the II convocation parliamentary election there was a software created for the counting of votes upon protocols of the election commissions in 450 territorial constituencies. In the same year, the software was used at the time of the presidential elections.
In February 1999, the Central Election Commission developed and approved the Concept of a unified data-processing system “Vybory“ (“Elections”).

Using of the “Vybory” system for the 1999 presidential elections and the 2000 national referendum confirmed the Commission was on the right way. Each of the next electoral campaigns provided an input to further development and improvement of “Vybory” system, increase in its operational capacities.
The 2002 parliamentary elections made a significant contribution to expansion and improvement of data-processing, analytical and timely informational support to elections and relevant public disclosure thereof.
In 2002 Precinct election commissions for the first time became a part of the electoral information data-exchange system (once commissions are formed)
Development and implementation stages

2002

It was the first time when citizens and international community could actually follow online the overall status and voting results within Ukraine, particular regions or constituencies and what is more at all polling stations.
The rapid development of IT technologies, software tools and database management systems provide for new opportunities of “Vybor” system modernization and implementation of nowadays application components. This requires new technology and telecommunications facilities, essential to the effective operation “Vybor” system, preventing unauthorized access, misuse and violation of information integrity in its databases.
"Vybory" system increased effectiveness of:

- automatic process of district and precinct election commissions formation;
- leadership positions appointment in the district and precinct election commissions;
- defining needs of polling stations in the ballot papers quantity;
- the CEC official website publication on voter turnout;
- informing the public via the Internet on the voting process and results on ongoing basis;
- information release on vote counting results at each polling station.
Automated Information and Telecommunication System «National Voter Register»: Development, implementation and operation features
Central Election Commission

National Voter Register: development and implementation stages
Ukrainian Parliament adopted the Law “On the National Voter Register”

The Law came into force on October 1\textsuperscript{st}, 2007

The Central Election Commission was authorized to manage the National Voter Register.

This was followed by unprecedented range of activities on the Register development and implementation.
Establishment of the National Voter Register bodies:

The Central Election Commission—the National Voter Register managing body;

The National Voter Register Administration;

27 regional administrative bodies of the National Voter Register;

756 maintenance bodies of the National Voter Register.
The CEC decides to engage internal IT resources to develop the application software for the Register.

The software tools for the Register implementation and maintenance are developed and installed according to the Terms of Reference approved.
In accordance with the Plan of Activities approved for Register Implementation the following was procured:

- Technical equipment for data-processing center;
- The user authentication software and hardware;
- General system software;
- Telecommunication equipment.
Development and implementation stages
April – September 2008

The Register server room
soft- and hardware equipment
installed and configured

The telecommunication
network for the Register was
created on the basis on JSC
“Ukrtelecom” multiservice
network

All users’ PCs were
connected to the same
domain drv.gov.ua.
The Register system was tested within actual operation mode of the National Voter Register Administration.

The Register operation was demonstrated to representatives of Delegation of EU to Ukraine and OSCE Coordinator Office to Ukraine.
The Register Administration provided trainings for regional administrative bodies’ stuff and for chief staff of 756 maintenance bodies.

Training for more than 2400 employees of the Register maintenance bodies were provided according to Cooperation Plan between CEC and OSCE Project Coordinator in Ukraine within the project “Support to further strengthening of electoral processes in Ukraine”.

Development and implementation stages
Automated information and telecommunication system “The National Voter Register” is Go-Live.

This day is considered the Birthday of the Register.
The State Voter Register operation

The quantitative characteristics of the Register

Records Total – **39 383 660**
  - including: records of voters – **36 663 521**
    - including: those who have electoral address – **36 059 629**
      - marked as no longer residing – **573 622**
    - records of the dead – **2 994 562**
  - records of persons deprived of their citizenship – **34 136**
  - records of persons recognized as incapable – **21 711**
The National Voter Register System
Internet resource

wwwDRV.gov.ua
The National State Voter Register Operation
Control subsystem of multiple voter records

During the operation period of the National Voter Register 1,185,478 of multiple voter records were identified and removed:

- in 2009 – 584,083 (49%)
- in 2010 – 351,221 (30%)
- in 2011 – 173,909 (15%)
- in 2012 – 64,811 (5%)
- as of beginning of 2013 – 11,458 (1%)
The Register operation at the 2012 Parliamentary Elections
Assessment of the Register data quality and voter lists

Unbiased assessment
In order to provide the independent assessment there was a subsystem created. It records the information transmitted to the Register bodies from election commissions on the results of the voter lists copies consideration after the Election Day. Once the voter list is formed the number of changes to it is regularly tracked (number of technical corrections, number of those additionally included to the lists, or removed).

The Percentages based on the number of participating voters.
Innovations

- Permanent polling stations register created, regularly maintained and updated

- Personalized invitations for voters at the parliamentary elections prepared by the Register bodies

- There was a geoinformation system developed aiming at displaying the borders of the permanent polling stations and location of the district election commissions.

- The most possible transparency and openness towards voters through IT and web services
Innovations

Personalized invitations for voters

Personalized invitations for voters were for the first time prepared by the Register bodies, based on the Register data. The scope of work is comparable to formation and issue of voter lists.

Advantages:

• Increased quality by manual work elimination and reduce in human mistake during invitations preparation;
• Reduced work-load for the precinct election commission (savings of at least 5 people./day.)
• Opportunity for voters to check their personal details not coming to the polling station.
• Economy of financial resources due to shipping cost elimination.
• The potential manufacturing costs pay off through non-political commercial advertisement placement on the back side of voter invitation.
Information and telecommunication system “Video-observation”: Development, implementation and operation
The Ukrainian Parliament adopted the Law “On 2012 Parliamentary elections openness, transparency and democracy”

The Central Election Commission was authorized to manage the system of video observation.

This was followed by unprecedented range of activities on the development and implementation of Video-observation system.
Video cameras on polling stations were the main innovation of the Parliamentary elections 2012.

Urgently created video-observation system was for the first time tested on October 18th, 2012. From September, 24th till October, 17th 32 192 polling stations all over Ukraine were equipped by special soft- and hardware systems.
Development and implementation stages

October 18th, 2012

Hard- and software systems include:
Laptop HP Pro Book 4540 s 15.6,
Two cameras Logitech C310,
USB-Extension,
Extension lead Defender,
Metal safe with lock,
Security cable.
Development and implementation stages

Central Election Commission Resolutions

- On the Cabinet of Ministers consideration of technical specification and configuration for Video-observation system
- On development and implementation of the system for video-observation, recording and transmission during 2012 Parliamentary elections
- On web-page development for video transmission from district election commission of ordinary polling station during 2012 Parliamentary elections
- On procedures for video-observation at polling stations with video-observation facilities, access and control over video-observation system during 2012 Parliamentary elections
- On procedures of the web-page operation for video transmission from district election commission of ordinary polling station during 2012 Parliamentary elections
- On the maintenance of the system for video-observation, recording and transmission during 2012 Parliamentary elections
- On procedures for access to information recorded by video-observation system
- On procedures for exploitation of soft- and hardware systems of video-observation, recording and transmission
System Operation

System operation scheme
System Operation
Logging in the system

The Portal wybory2012.gov.ua allows authorization through popular IT services: Google, Yandex, Mail.Ru, social networks Vkontakte, Facebook, Twitter and LinkedIn, as well as OpenID or it’s possible to register on the Portal.
The user can select the video camera at any polling station in any region of Ukraine.
The process of voting could be observed online on October 28th from 8:00 till 20:00. After polling stations closure video cameras were recording and storing information. According to the legislation all video records should be stored a year and if necessary, provided to electoral process participants, law enforcement agencies and the courts. After this period the video will be destroyed.
Thanks for your attention