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Services for the development of the "Electronic Voting" system

COUNTRY OF ORIGIN	IDENTIFIER	PUBLISHED	LAST UPDATE	DEADLINE
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Услуги по разработке системы «Электронное голосование»

Responsible

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Summary

The United Institute of Informatics Problems offers consumers services for the development of an “Electronic Voting” system for automated holding of elections, referendums, polls, ranked elections (primaries) and nomination of candidates, testing student knowledge, conducting a unified state exam with centralized issuance of individual grades under an outsourcing agreement and is looking for partners to conclude a distribution services agreement.

Description

The system is designed for automated holding of elections, referendums, polls, ranked elections (primaries) and nomination of candidates.
The technology includes the following automated procedures:

- updating electronic voter lists by precinct, printing individual invitations marked with bar codes (BC) and information sheets for completing tablets (booklets);
- control and registration of voters who came to the polling station using one-time invitations or permanent ID cards;
- recording in non-volatile memory codes of candidates, parties, answers to questions that are highlighted (indicated) by voters using a portable terminal (“electronic pointer-ballot”);
-automatic counting of vote distribution and announcement of results using a digital scoreboard and a speech synthesizer;
- automatic printer printing of encrypted voting protocols and control protocols published at the polling station;
- network transmission of “electronic protocols” to the server of the conducting and/or controlling organization;
- summing up the results of the event by the organization.

An automated polling station can be equipped with a set of specialized autonomous devices or can be based on a

regular computer, supplemented by office equipment such as a laser printer, a barcode reader, a modem, and two electronic displays. Voting is carried out using terminals, the number of which varies from 5 to 15 per polling station. and information tablets and/or booklets (photo 1). The latter contain the full wording of the referendum questions, information about the candidates and parties being voted on, including their photos, emblems, numbers, etc. Portable terminals can also be used for voting at home. The cost of such an “electronic pointer-bulletin” device in mass production will be ~$25.

Transferring data from the terminal's memory to a computer is carried out using an “electronic ballot box” (photo 2), which also contains a compact thermal printing unit that issues a check to the voter with a conditional number, by which the voter can secretly check his result at the end of voting day. When summing up the results, the same block of thematic printing can print out a control tape with all individual voting results, which is equivalent to storing paper ballots. The length of paper tape required to print 3000 results is 12 meters with a tape width of 40 mm
Continuous display on two boards of the number of registered and voted voters at the polling station eliminates the possibility of “stuffing” votes for those who did not show up. Automatic generation of protocols guarantees the reliability of the results for the site. If desired, each voter can secretly check how his vote was counted. Encrypting the voting results with a cryptoprogram and printing them in machine-readable form eliminates the possibility of malicious changes to the protocols. The results are also stored in non-volatile memory, protected from modification. Transmission of protocols certified by a digital signature over the network to a central computer, as well as display of voting results by precinct and generalized results on the Internet, increases efficiency, reduces the number of paid personnel, and minimizes the influence of the human factor.

During the period between elections, equipment from polling stations located in educational institutions can be used to test students' knowledge. It is possible to conduct a unified state exam with centralized issuance of individual grades, which are stored in a common database. Certificates are printed automatically using cryptographic security measures.
An experimental electronic voting system is demonstrated in action at the stand of the United Institute of Informatics Problems of the National Academy of Sciences of Belarus.

Advantages and Innovations

Full transparency of voting procedures, testing of students and summing up results is ensured.

Stage of development

Already on the market

Funding source

State budged
Internal

IPR status

Secret know-how

Sector group

Creative Industries
ICT Industry & Services

CLIENT INFORMATION

Type and size of client

R&D institution

Year established
1965

NACE keywords
J.62.0 - Computer programming, consultancy and related activities
J.62.01 - Computer programming activities
J.62.02 - Computer consultancy activities
M.72.19 - Other research and experimental development on natural sciences and engineering
M.74.90 - Other professional, scientific and technical activities n.e.c.

Turnover (in EUR)
10-20M

Already engaged in transnational cooperation
Yes

Additional comments
United Institute of Informatics Problems of the National Academy of Sciences of Belarus is the leading organization in the Republic of Belarus for fundamental and applied research in the field of information technologies: design automation, applied mathematics, supercomputer technologies, bioinformatics and medical informatics, geographic information systems, digital cartography, information space technologies, Grid-technologies. The Institute is a provider of the scientific and educational Internet in Belarus, participates in the development of recommendations on the use of the results of scientific research, scientific support for informatization processes in the Republic of Belarus, the development of forecasts in the relevant fields of science and technology, and the training of highly qualified personnel.

Scientific directions:
- automation of engineering systems design;
- processing and recognition of signals, images, speech;
- geoinformation systems;
- input and output of video information;
- operations research and discrete optimization;
- data protection;
- decision-making in emergency situations;
- bio- and medical informatics;
- computer networks, databases and telematic applications;
- supercomputer technologies and parallel computing, Grid technologies;
- information and reference systems.

The strategic goal of the UIIP NAS of Belarus is the creation and implementation of systems developed on the basis of modern scientific theories and methods of information technology. At the same time, the main directions are the development and creation of high-performance systems and advanced technical base of network technologies based on the principles of GRID and cloud computing. Integration of high-performance computing resources of the institute into the European and world network will create conditions for the export of services to other countries. Another important export factor should be the computing complexes and systems created in the laboratories of the institute and designed as a finished hardware and/or software product. The areas of application of these products are automation of the full life cycle of products in industry and electronics, medical informatics, space information systems, information systems in management and government, public information services, and

others.

Along with the expansion of scientific and technical cooperation with partners from the CIS countries, Western and Eastern Europe, much attention was paid to expanding the geography of scientific and technical cooperation and entering new markets for scientific and technical products (China, the countries of the Persian Gulf and a number of other countries).

The strategic goal of the implementation of international projects is to increase the competitiveness of domestic scientific and technical products, their promotion to the world market, the maximum attraction of foreign investment in the research sector of the Republic of Belarus.

Languages spoken

Russian

INFORMATION ABOUT PARTNERSHIP

Type of partnership considered

Distribution services agreement
Outsourcing agreement

Type and role of partner sought

Consumers interested in purchasing services for the development of the Electronic Voting system for automated holding of elections, referendums, polls, ranked elections (primaries) and nomination of candidates, testing student knowledge, conducting a unified state exam with centralized issuance of individual assessments under an outsourcing agreement.

Partners interested in purchasing services for the development of the Electronic Voting system for automated holding of elections, referendums, polls, ranked elections (primaries) and nomination of candidates, testing student knowledge, conducting a unified state exam with centralized issuance of individual assessments under a distribution services agreement.

Type and size of partner sought

University

ATTACHMENTS

Elections-1.jpg

Elections-2.jpg