(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/038632 A1

(51) International Patent Classification[7]: G06F 17/60

(21) International Application Number:
PCT/US2003/007260

(22) International Filing Date: 8 March 2003 (08.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/US02/33837 22 October 2002 (22.10.2002) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US PCT/US02/33837 (CIP)
Filed on 22 October 2002 (22.10.2002)

(71) Applicant *(for all designated States except US)*: **VOTING TECHNOLOGIES INTERNATIONAL, LLC** [US/US]; 757 N. Broadway, Milwaukee, WI 53202 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: **BOLDIN, Anthony, J.** [US/US]; 370 Manor Court, Brookfield, WI 53005 (US).

(74) Agent: **BAXTER, William, K.**; Godfrey & Kahn, S.C., 780 N. Water Street, Milwaukee, WI 53202 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*
— *of inventorship (Rule 4.17(iv)) for US only*

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPUTERIZED ELECTRONIC VOTING SYSTEM

(57) Abstract: The present invention is a computerized electronic voting system that employs an easy-to-use, paperless, voting station to collect and tally votes. In one embodiment, the voting system includes a voting server coupled to a voter security station and a plurality of voting stations. Alternatively, the voting system may include a voting server that is connected to an existing network and coupled to a voter security station. In another embodiment of the invention, the voting system comprises a voting server connected to a plurality of work stations or voting stations and a voter security station, former a computer network. The system software installed on the voting server preferably includes a voting application and an administrative application for controlling operation of the voting process. Important aspects of the invention include the validation of system software prior to use in an election that has been previously certified by the proper governmental certification authority, the ability to verify or authenticate registered voters prior to voting, the functionality of multiple voting stations running on a single computer or server, and the aiditability of voting results.

WO 2004/038632 A1

COMPUTERIZED ELECTRONIC VOTING SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of international application No. PCT/US02/33837, filed October 22, 2002, claiming priority to U.S. provisional application No. 60/344,889, filed December 31, 2001, both of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

The present invention relates generally to a computerized voting system, and more particularly to a computerized electronic voting system comprising a computer with a plurality of voting stations connected thereto for collecting and tallying votes in an election.

Voting systems in place around the world typically involve paper ballots, mechanical machines, punch cards, optical scanning systems, and more recently direct recording voting equipment. These prior art voting systems have proven to be less user-friendly and less reliable than needed to conduct a fair, controversy free election. The controversy surrounding the 2000 U.S. presidential election in Florida forced citizens to recognize that the prior art voting systems are far from state of the art and has spurred efforts to develop easier to use and more reliable voting systems.

The paper ballots used in some areas may be as simple as a form onto which the selected candidates names are written or on which Xs are placed next to the names to indicate the candidate selected by the voter. Alternatively, the paper ballot may have punch holes adjacent the candidate names or ballot issues. There are many disadvantages to paper ballots and punch cards. One is the fact that paper ballots and punch cards can become physically damaged, or altered, between the time the voter

makes his/her selections and the time a ballot is counted. Another disadvantage is that voters can inadvertently punch the hole or place an X next to a different candidate than was intended by the voter. In addition, write-in votes must be manually read by an election official, which is time consuming and may be difficult, depending upon the legibility of the voter's handwriting. Also, paper ballots must be custom printed for each election, with at least one ballot printed for each potential voter. Since the ballots are specific to a particular election, the costs for printing ballots for each election may be significant.

Mechanical voting machines include mechanical switches and/or levers which are actuated by a voter to increment one of a plurality of mechanical counters. At the end of the election, the counters for each of the machines at each polling place are tallied and the results are reported to the jurisdictional headquarters. While these machines solve some of the problems associated with paper ballots and punch cards, the machines are fairly expensive and have many mechanical parts which require routine maintenance and repair. In addition, these machines are heavy and cumbersome to move and set up for each election. Another disadvantage is the manual tallying of the counters on the machines at the precincts and the manual reporting of the results to the jurisdictional headquarters.

There are a variety of other non-electronic methods for conducting an election. Unfortunately, each suffer from many of the same problems discussed above, such as illegible ballots which must be discarded, votes inadvertently cast for unintended candidates, excessive costs, and the ease with which the election results may be altered by tampering.

While some electronic voting systems have been developed to solve some of the above mentioned problems, none of the electronic voting systems have been successful enough to result in widespread use.

Some prior art electronic systems include a form of transportable memory, which is used to transport data between the jurisdictional headquarters and the precinct. Other electronic based systems include video displays which present the required ballot information to a voter. Such systems require the voter to scroll through the available options to make their selection. This may be confusing to some voters who may become lost and frustrated in the hierarchy of screen formats, so as not to complete their ballot or to do so erroneously. Other electronic based systems include voting tablets with printed ballot overlays laid on top of the voting tablet. In this case, the voter actuates switches from a matrix of switches to make their selections. Again, this process may be difficult or confusing for a voter to understand.

Another problem with electronic-based systems is the inability to deal with differing ballot styles even within a precinct wherein certain voters may be eligible to vote on certain races and other voters eligible to vote on other races. Most electronic based systems must be manually controlled to provide the proper ballot styles to each voter or the proper combinations selected from among many to provide the correct eligibility for the voter. This places an undue burden on the operators administering the election and presents significant opportunity for error.

Other proposed electronic-based systems include a machine readable card that is given to each voter. The voter must be given the appropriate card for that voter, and then properly place the card in a voting terminal before they can vote. This

system may have drawbacks as well, due to the possibility of errors and confusion from using such a system.

Accordingly, there is a need for an improved computerized electronic voting system that makes voting more accessible, is easy to use, more user-friendly, less expensive, and more secure than prior art voting systems.

SUMMARY OF THE INVENTION

The present invention is a computerized electronic voting system comprising a voting server coupled to a plurality of voting stations and a voter security station for collecting and tallying votes in an election. The voting system can be configured as a stand-alone system or connected to an existing computer network. The voting system further comprises software that is loaded on the voting server to handle all aspects of the voting process. The software is preferably comprised of a voting application and an administrative application.

The voting server is a computer that preferably comprises a motherboard with at least one processor and memory, at least one hard drive, a disk drive, a plurality of video boards, and a power supply installed within a computer enclosure or processing box. The processor must be sufficient to support the plurality of voting stations at one time. The video boards offer simultaneous control of the plurality of voting stations while functioning independently of each other. The voting system is also preferably equipped with a software verification program or a software key to prevent the software from running without the software being the same as the software certified by the governing voting authority or the software key being properly installed on the computer.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.