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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
3 November 2016 (03.11.2016)

WIPO | PCT

(10) International Publication Number
WO 2016/175704 A1

(51) International Patent Classification:
G06Q 50/26 (2012.01)

(21) International Application Number:
PCT/SG2015/050089

(22) International Filing Date:
30 April 2015 (30.04.2015)

(25) Filing Language: English

(26) Publication Language: English

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2016/175704 A1

(54) Title: A POLLING SOFTWARE AND METHOD FOR CARRYING OUT POLLING

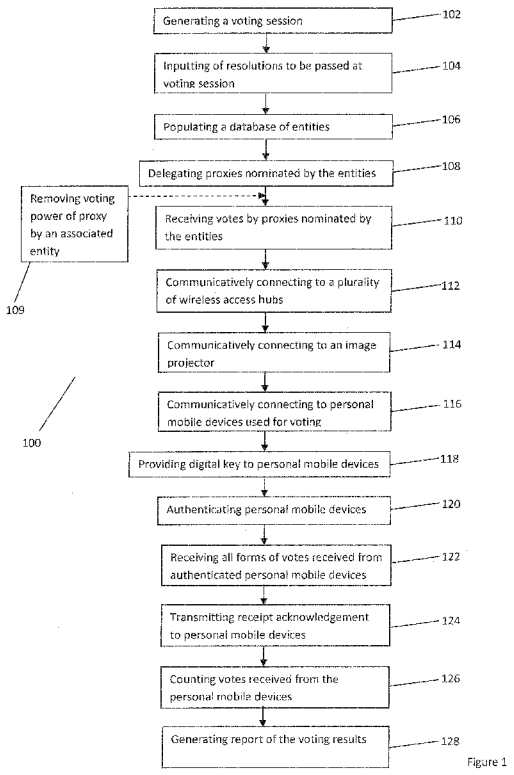

Figure 1

(57) Abstract: There is provided a method for carrying out polling using an apparatus for polling. The method comprises communicatively connecting to a plurality of personal mobile devices, each of the plurality of personal mobile devices being used for voting; providing a digital key to each of the plurality of personal mobile devices; authenticating the plurality of personal mobile devices when the digital key is input on each of the plurality of personal mobile devices; receiving votes from each of the authenticated personal mobile devices; and counting the votes received from each of the authenticated personal mobile devices. A related polling software is also disclosed.

A POLLING SOFTWARE AND METHOD FOR CARRYING OUT POLLING

FIELD OF INVENTION

The present invention relates to a polling software and method for carrying out polling.

BACKGROUND

In the modern world where communications technology allows an individual to be continually contactable, there are still instances when a physical presence of the individual is required. One of these instances when the individual is required is where "official voting" is carried out, whereby official voting refers to polls which involve the interests of substantial numbers of stakeholders and where the results need to be audited and verifiable. Some examples include, voting carried out at the Annual General Meeting of public listed companies, state elections, national elections and so forth.

Currently, there are several ways of carrying out voting in such instances, ranging from traditional ways involving pen-and-paper to ways involving use of proprietary hardware/devices. The proprietary hardware/devices typically use radio frequency or data networks. In addition, it is difficult for users of the proprietary hardware/devices to simply turn up and use the hardware/device. Prior training of users is often required as user interfaces and vote selection syntax are difficult to comprehend, especially to non tech-saavy users. Furthermore, the users are unable to confirm if their votes have been correctly transmitted. Moreover, substantial financial investment is usually necessary to procure the proprietary hardware/devices. Thus, the proprietary hardware/devices are not appealing to users. Finally, costs are increased further as specialist entities/companies usually need to be engaged to provide the proprietary hardware/devices.

In addition, it is presently only possible for split voters to vote under pre-session circumstances and they are not able to vote concurrently together with entities' votes.

It is clear that there are issues which need to be addressed with regard to polling systems.

SUMMARY

In a first aspect, there is provided a method for carrying out polling using an apparatus for polling. The method comprises communicatively connecting to a plurality of personal mobile devices, each of the plurality of personal mobile devices being used for voting; providing a digital key to each of the plurality of personal mobile devices; authenticating the plurality of personal mobile devices when the digital key is input on each of the plurality of personal mobile devices; receiving votes from each of the authenticated personal mobile devices; and counting the votes received from each of the authenticated personal mobile devices. Preferably, the votes are selected from entities' votes, and proxy votes, and the digital key is provided either to the personal mobile devices using a data messaging service or using a printed medium.

The method can further include transmitting acknowledgement of receipt of votes to the personal mobile devices; generating a voting session; inputting of resolutions to be passed at the voting session; populating a database of entities; delegating proxies nominated by the entities; removing voting power of proxy by an associated entity; receiving votes from the proxies and entities; communicatively connecting to a plurality of wireless access hubs; communicatively connecting to an image projector; and generating report of the voting results.

It is preferable that the digital key is a secure generated passcode which can be provided via a weblink configured to launch a web browser on each of the plurality of personal mobile devices to access a private portal to carry out voting.

In a second aspect, there is provided a polling software comprising an authentication module configured for verifying personal mobile devices; a database module configured for storing IDs of the personal mobile devices, the IDs being used by the authentication module; and a counting module configured for counting votes transmitted from the personal mobile devices. It is preferable that the counting module is also configured to operate only with votes transmitted from the personal mobile devices verified by the authentication module, and that the votes are selected entities' votes, and proxy votes. Preferably, the IDs stored in the database module are associated with respective eligible voters and proxies.

It is preferable that the authentication module is configured to verify votes received from the authenticated the personal mobile devices by generating a digital key, whereby the digital key is provided either to the personal mobile devices using a data messaging service or using a printed medium. The digital key can be a secure generated passcode which can be provided via a weblink

configured to launch a web browser on each of the personal mobile devices to access a private portal to carry out voting.

The polling software can further include a communication module configured for enabling the data messaging service; and a graphic module configured for generating information populated by the polling software.

DESCRIPTION OF FIGURES

In order that the present invention may be fully understood and readily put into practical effect, there shall now be described by way of non-limitative example only preferred embodiments of the present invention, the description being with reference to the accompanying illustrative figures.

Figure 1 shows a process flow for a method of the present invention.

Figure 2 shows a schematic diagram for a software of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Reference is made to Figure 1, which discloses a method 100 for carrying out polling using an apparatus for polling. For example, the polling can be used to determine if a resolution is passed at an annual general meeting, polling can be used at an election, and so forth. The apparatus for polling can be either a typical computer system running a polling software, or a standalone device configured primarily for conducting polling. A polling software which will be described in greater detail with reference to Figure 2 can be used in the typical computer system as mentioned earlier.

The method 100 comprises generating a voting session (102). This step 102 can include inputting a name of a company and a date of the session. Subsequently, resolutions to be passed at the voting session are input (104). Subsequently, a database of entities is populated (106), whereby the entities are eligible voters at the session. The method 100 also includes delegating proxies nominated by the entities (108) to ensure that the proxies are eligible to vote. It is also possible for an entity to remove a voting power of an associated proxy (109) if necessary, for example, during instances when the entity is able to be present when the entity initially could not do so.

Receiving of pre-votes from the proxies and the entities are then carried out (110). In the situation of an annual general meeting, the entities are able to nominate a chairperson as their proxy, and the chairperson pre-votes on behalf of the entities who nominated the chairperson. The method 100 then includes communicatively connecting to a plurality of wireless access hubs (112), whereby the wireless access hubs can be either a Wifi Access Point or a Wifi router (when remote voting is enabled). The method 100 also includes communicatively connecting to an image projector (114) so that polling results can be shown in real-time to those who are present at the session once the results have been tabulated.

Subsequently, a plurality of personal mobile devices which has a touchscreen/addressable screen, a web-browser and wifi connectivity, for example, smartphones, tablets, laptops, is communicatively connected (116), whereby each of the plurality of personal mobile devices is used for voting. In order to be used in the method 100, the personal mobile devices require a web browser and can be running on any known operating system, such as, for example, iOS, Android, Windows, Symbian, Mac OS, and so forth. Then a digital key is provided to each of the plurality of personal mobile devices (118) once the owners/operators are have been verified in accordance with steps 106 or 108. The digital key is provided either to the personal mobile devices using a data messaging service (for example, SMS, Whatsapp, Line, Viber, and the like) or using a printed medium (for example, a bar code, a pixelated code, an alphanumeric sequence and so forth). The digital key is a secure generated passcode which can be provided (for example, using a data messaging service) as a weblink configured to launch the web browser on the personal mobile device to access a private portal to carry out voting.

Then, the method 100 includes authenticating the plurality of personal mobile devices when the digital key is input on each of the plurality of personal mobile devices (120), and all forms of votes (entities' votes, and proxy votes) are then received from each of the authenticated personal mobile devices (122) when the entities submit their votes. For the avoidance of doubt, proxy votes are entity votes delegated to proxies to vote on their behalf. The method 100 then includes transmitting acknowledgement of receipt of votes to the mobile phones (124) to inform the entities that their votes have been logged and the votes received from each of the authenticated mobile phones are then counted (126). In the method 100, acknowledgement means the vote has been properly registered into a counting module and is being used for computation purposes, not just a visual/audible indication of 'receipt'.

A result for each resolution can be displayed using the image projector, after counting the votes received during a pre-defined time limit, for example around half a minute. Finally, the method 100 includes generating report of the voting results (128), whereby the results of all the resolutions can also be displayed using the image projector.

It should be appreciated that the method 100 is able to facilitate convenient polling, without having to provide prior training (for both users of the apparatus for polling and the voters who use their own personal mobile devices) and/or manpower requirements. Furthermore, the method 100 also allows the submission of entities' votes, and proxy votes without pre-voting. In addition, an organisation who wishes to carry out polling does not need to procure devices for the voters as the voters can utilise their own personal mobile devices to interact with the apparatus during the voting process. A graphical user interface on their own personal mobile devices which is intuitive and elderly friendly can also benefit the voters. Furthermore, the method 100 also facilitates the voting process as authentication and differentiation of voters can be carried out with minimal waiting time for the entities and proxies who are eligible to vote. In addition, the method 100 can be easily scalable and can also be made to be used from a remote location. Furthermore, the method 100 also enables the provision of a private ad-hoc network which cannot be hacked into in advance.

In the event if the entity or the proxy is not able to be physically present, method 100 can be configured to provide long-distance authentication, registration and voting using remote presence technologies such as, for example, Teamviewer, remote desktop software and the like.

Referring to Figure 2, there is shown a schematic diagram of a polling software 200 which can be used to facilitate the method 100 as described earlier. The software 200 comprises an authentication module 208 configured for verifying personal mobile devices. The authentication module 208 is configured to verify the personal mobile devices by generating a digital key. The digital key is provided either to the personal mobile devices using a data messaging service (for example, SMS, Whatsapp, Line, Viber, and the like) or using a printed medium (for example, a bar code, a pixelated code, an alphanumeric sequence and so forth). The digital key is a secure generated passcode which can be provided (for example, using a data messaging service) via a weblink configured to launch the web browser on the personal mobile device to access a private portal to carry out voting.

There is a database module 204 configured for storing IDs of the entities and proxies, whereby the IDs are used by the authentication module 208 to ensure that the entities and proxies are eligible voters. The IDs stored in the database module 204 are associated with respective eligible voters.

The software 200 also includes a counting module 206 configured for counting all votes (entities' votes, and proxy votes) transmitted from the personal mobile devices, whereby the counting module 206 is also configured to operate only with votes transmitted from the personal mobile devices verified by the authentication module 208.

In addition, the polling software 200 also includes a communication module 202 configured for enabling the data messaging service; and a graphic module 210 configured for generating information populated by the polling software 200.

It should be appreciated that the software 200 is able to facilitate convenient polling as voters are able to use their own personal mobile devices. Furthermore, the software 200 also facilitates the submission of all votes (entities' votes and proxy votes) without a need for pre-voting. In addition, an organisation who wishes to carry out polling does not need to procure devices for the voters and this is beneficial economically. Moreover, the software 200 also facilitates the voting process as authentication and differentiation of voters can be carried out using the apparatus 200. Finally, the software 200 also enables the provision of a private ad-hoc network which cannot be hacked into in advance.

Whilst there have been described in the foregoing description preferred embodiments of the present invention, it will be understood by those skilled in the technology concerned that many variations or modifications in details of design or construction may be made without departing from the present invention.

CLAIMS

1. A method for carrying out polling using an apparatus for polling, the method comprising:

communicatively connecting to a plurality of personal mobile devices, each of the plurality of personal mobile devices being used for voting;

providing a digital key to each of the plurality of personal mobile devices;

authenticating the plurality of personal mobile devices when the digital key is input on each of the plurality of personal mobile devices;

receiving votes from each of the authenticated personal mobile devices; and

counting the votes received from each of the authenticated personal mobile devices,

wherein the votes are selected from a group consisting of: entities' votes, and proxy votes.

2. The method of claim 1, wherein the digital key is provided either to the personal mobile devices using a data messaging service or using a printed medium.

3. The method of either claim 1 or 2, further including:

transmitting acknowledgement of receipt of votes to the personal mobile devices.

4. The method of any of claims 1 to 3, further including:

generating a voting session;

inputting of resolutions to be passed at the voting session;

populating a database of entities;

delegating proxies nominated by the entities;

removing voting power of proxy by an associated entity;

receiving votes from the proxies and entities;

communicatively connecting to a plurality of wireless access hubs;

communicatively connecting to an image projector; and

generating report of the voting results.

5. The method of any of claims 1 to 4, wherein the digital key is a secure generated passcode which can be provided via a weblink configured to launch a web browser on each of the plurality of personal mobile devices to access a private portal to carry out voting.

6. A polling software comprising:

an authentication module configured for verifying personal mobile devices;

a database module configured for storing IDs of the personal mobile devices, the IDs being used by the authentication module; and

a counting module configured for counting votes transmitted from the personal mobile devices,

wherein the counting module is also configured to operate only with votes transmitted from the personal mobile devices verified by the authentication module, and wherein the votes are selected from a group consisting of: entities' votes, and proxy votes.

7. The polling software of claim 6, wherein the authentication module is configured to verify votes received from the authenticated the personal mobile devices by generating a digital key.

8. The polling software of claim 7, wherein the digital key is provided either to the personal mobile devices using a data messaging service or using a printed medium.

9. The polling software of either claim 7 or 8, wherein the digital key is a secure generated passcode which can be provided via a weblink configured to launch a web browser on each of the personal mobile devices to access a private portal to carry out voting.

10. The polling software of claim 9, further including:

a communication module configured for enabling the data messaging service; and

a graphic module configured for generating information populated by the polling software.

11. The polling software of any of claims 6 to 10, wherein the IDs stored in the database module are associated with respective eligible voters and proxies.

12. An apparatus for polling using the polling software of any one of claims 6 to 11.

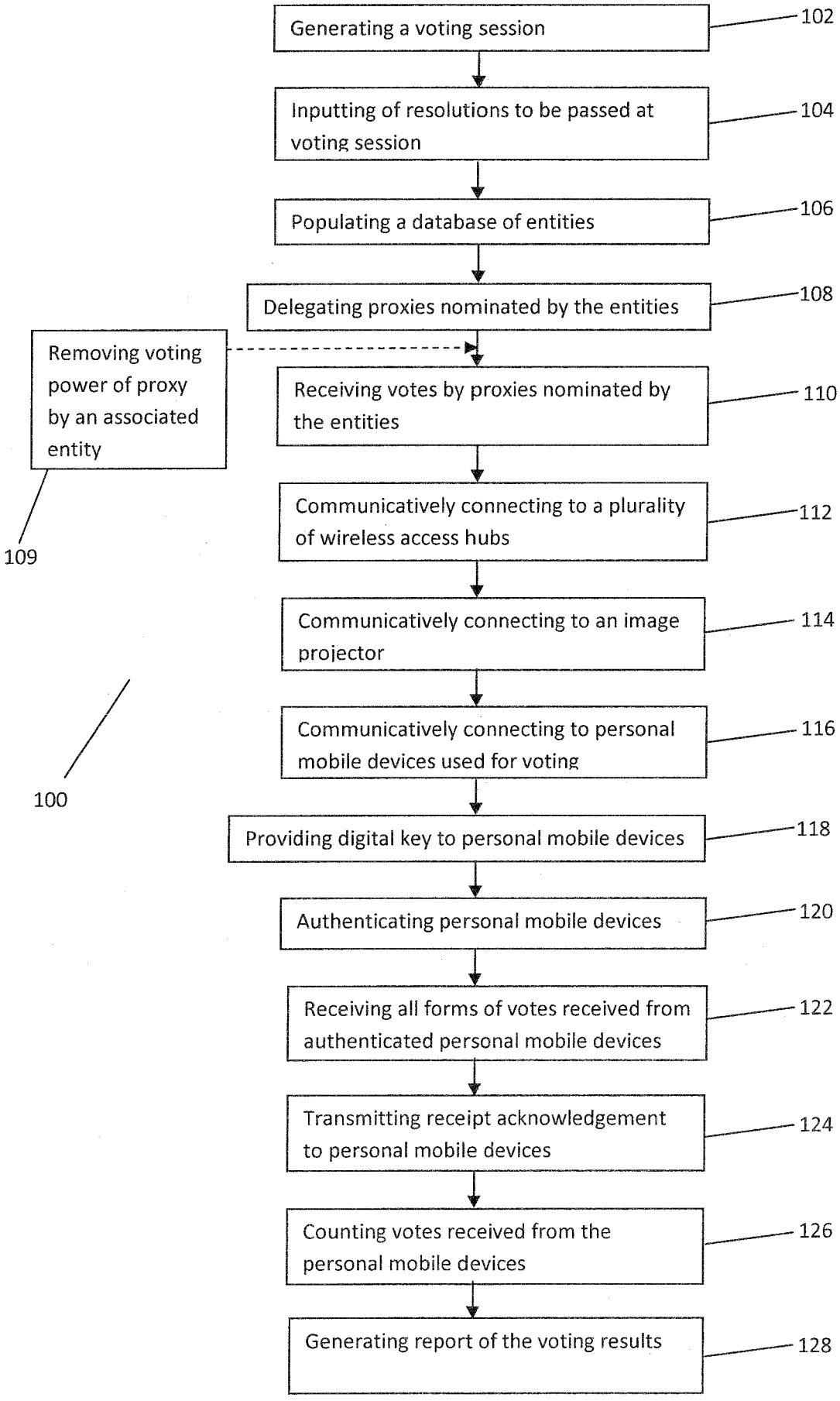
Generating a voting session
102
Inputting of resolutions to be passed at voting session
104
Populating a database of entities
106
Delegating proxies nominated by the entities
108
Removing voting power of proxy by an associated entity
109
Receiving votes by proxies nominated by the entities
110
Communicatively connecting to a plurality of wireless access hubs
112
Communicatively connecting to an image projector
114
100
Communicatively connecting to personal mobile devices used for voting
116
Providing digital key to personal mobile devices
118
Authenticating personal mobile devices
120
Receiving all forms of votes received from authenticated personal mobile devices
122
Transmitting receipt acknowledgement to personal mobile devices
124
Counting votes received from the personal mobile devices
126
Generating report of the voting results
128

Figure 1

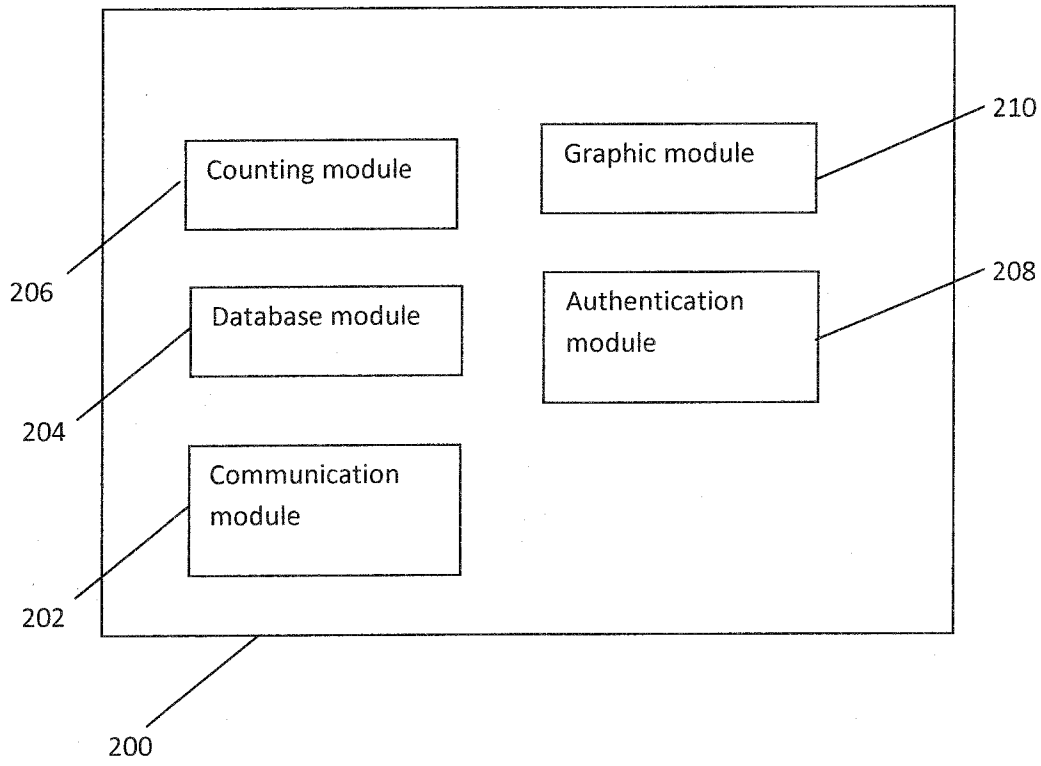
Counting module
Graphic module
Database module
Authentication module
Communication module
206
210
208
204
202
200

Figure 2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SG2015/050089

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl. G06Q50/26(2012.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl. G06Q50/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996
Published unexamined utility model applications of Japan 1971-2015
Registered utility model specifications of Japan 1996-2015
Published registered utility model applications of Japan 1994-2015

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005/0101307 A1 (ALCATEL) 2005.05.12, pars.[0016],[0020]-[0024],[0031] & EP 1530169 A1	1-12
Y	JP 2002-49742 A (SUMITOMO MITSUI BANKING CORP.) 2002.02.15, pars.[0028],[0033]-[0034], fig.20 (No Family)	1-12
Y	WO 2013/182252 A1 (KUTLUALP, Hakan Bilal) 2013.12.12, page 12, lines 13-24, figs.1-3 (No Family)	2-5,8-12
Y	JP 2015-41178 A (GRANT INC.) 2015.03.02, pars.[0016],[0081] (No Family)	4-5

☑ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
22.07.2015	04.08.2015

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Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SG2015/050089

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2015-49594 A (WISDOM WEB CO., LTD.) 2015.03.16, pars.[0009],[0033] (No Family)	4-5