Methods, apparatuses, systems and services for One-stop solution to complement and reinforce compliance to the Do Not Call (DNC) Registry and Spam Control Act

Field of Invention

The embodiments of the present invention of methods, apparatuses, systems and services for One-stop solution to complement and reinforce compliance to the DNC Registry, Personal Data Protection Act (PDPA) and Spam Control Act, by facilitating the flow of mutual trust, convenient communication and database management between individuals and organisations.

Refer to FIG. 1 for the Overview of Flowchart diagram of an illustrative process of using the One-stop Solution Platform Portal for the Organisations and Individuals, according to the embodiments of this present invention.

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Background of the Related Art:

Advances in technology has resulted in an increasing numbers of unsolicited and undesirable telemarketing messages via electronic communication by emails, telephone voice calls, fax messages and mobile text messages, including Short Message Service (SMS) and Multimedia Messaging Service (MMS), due to large amount of personal data which are easily collected, used and even shared with third party organisations for various commercial and/or personal reasons. This phenomenon will continue to grow exponentially since technology helps simplify the process of handling vast amount of information such as personal data. This leads to concerns and complaints from individuals about how their personal data are being used.

It is essential to have a data protection act, such as the Personal Data Protection Act (PDPA) in Singapore and similar regulations in other countries, to safeguard the collection, care, use and disclosure of both electronic and non-electronic personal data, so as to address these individuals' concerns and to maintain public consumers' trust in organisations which manage personal data records. The PDPA understands the rights of individuals to protect their personal data, including rights to gain access and correct data, as well as, the needs of organisations to collect, use or disclose personal data for legitimate, business and reasonable purposes.

The PDPA started with the DNC Registry provisions on 2 January 2014 and the main data protection rules will start on 2 July 2014. The aim of the DNC Registry is to minimize the number of unexpected, undesired and unwanted telemarketing voice calls, mobile text messages and fax messages. The DNC Registry grants individuals and/or consumers the choice to register Singapore telephone numbers including mobile, fixed-line, home and business numbers, to opt out of receiving telemarketing messages via phone calls, mobile text messages, such as SMS or MMS, and fax messages from organisations.

The transition time frame is for organisations to examine and apply internal personal data protection policies and practices to comply with the PDPA. After this transition period, the PDPC can conduct investigations upon receiving any complaint or on its own reason to determine if an organisation is complying with the Act.

Organisation has to check that such telemarketing messages are not sent to Singapore telephone numbers registered with the DNC Registry, whether directly sending such marketing messages, causing the message to be sent or authorising another organisation to do so. If an organisation violates any of the data protection provisions in the PDPA, it may be given the directions to ensure compliance, which require the organisation to do the following actions, such as stop collecting, using or disclosing personal data in contravention of the Act; destroy personal data collected in contravention of the Act; provide access to or correct the personal data; and/or pay a financial penalty of an amount not exceeding $1 million, which can be costly and damaging to the reputation of the organisations.

Refer below for the Table showing comparisons on role of organisations sending marketing messages and role of this service provider platform portal with features & functions, which can help organisations, according to the embodiments of this present invention.

Role of organisations sending marketing messages to Singapore telephone numbers:	**Role of service provider platform portal with features & functions <u>which can help:</u>**
Check with the DNC Registry, unless organisations have the recipients' clear and unambiguous consent in written or other accessible form for sending the marketing message to the Singapore telephone number.	Providing clear, express and unambiguous consent in evidential form from the user, recipients or subscriber of the number on electronic form for organisations to send marketing message to the Singapore registered telephone number.
Organisations may also send a text or fax message (but not voice call) on related products, services and memberships to individuals with whom they have an on-going relationship (a series of one-off transactions does not constitute an on-going relationship), without the need to check the DNC Registry. In the telemarketing message, they are required to provide information on how individuals can opt out of such messages using the same medium by which the message is sent. Upon receiving an individual's opt-out request, they may no longer rely on the exemption and must stop sending such messages to that individual 30 days after the opt-out.	Although this platform portal does not help organisations to establish on-going relationship with individuals, it allows the individuals to opt in and/or out of marketing messages from the list of organisations anytime, by checking the "Consent to contact" using the "opt in" and/or "opt out" checkboxes shown at the organisations' Business profile, which includes the communication modes which are either email and/or mobile text messages such as SMS and/or MMS. The organisations can keep track of such updates daily via automatic updates shown on account's past transaction history, or full report sent at end of the day via Excel file to organisations' emails, so that they can update their contactable marketing list and ensure they comply with the PDPA.
If organisation is sending a text or fax message, include clear and accurate information identifying the organisation as well as contact details within the message. This allows the recipient to contact the organisation for clarifications, if necessary.	Organisations must provide their identities and contact details when listed on this platform portal website and when they send marketing messages to recipients, so as to allow transparency and remain contactable by consumers at all times.
If organisation is making a voice call, ensure that the calling identity, or phone number from which the message is sent out from, is not concealed.	"Consent to be contacted" on the platform portal allows individuals to choose the method of communication preferred, including voice call, mobile texts such as SMS/MMS text and/or email, while excluding fax messages.

<u>Table showing comparisons on role of organisations sending marketing messages and role of service provider platform portal with features & functions, which can help organisations, according to the embodiments of this present invention.</u>

Registration with DNC Registry is free and will not expire, so individuals who have registered their Singapore telephone numbers may simply register first and not allow any marketing messages from all organisations, or they may forget whether they have given any consent to be contacted by any organisations after some time has passed. Prohibited telemarketing messages normally have at least one of the following commercial purposes, which are the typical marketing methods widely used across different industries, such as offer to supply, advertise or promote goods or services; advertise or promote suppliers or prospective suppliers of goods or services; or supply, advertise or promote land, interests in land or business or investment opportunities.

This broad definition of "telemarketing messages" has proved to be an obstacle for organisations, especially Small and Medium Enterprises, doing businesses in Singapore, since organisations now require more time, money and effort in mass marketing campaigns.

With the recently implemented PDPA governing the DNC Registry which limits the use of personal data in marketing messages, there have been many lost business opportunities and revenues are affected or reduced due to restrictions to reach out to a larger potential consumer population, especially for organisations with limited resources who are unable to invest heavily on expensive multi-media marketing methods.

Even with DNC Registry, there is still the possibility of breaches by organisations done knowingly or unknowingly, which are not reported by the public, due to the possibility of consumers and/or organisations not fully understanding the PDPA and/or are not educated in the process of filing a complaint.

Therefore, the embodiments of this invention create a win-win situation for both the individuals and organisations by providing One-stop Solution Platform Portal, to solve some of the potential problems arising due to PDPA, by complementing the DNC Registry and Spam Control Act.

Refer below for the Table showing how the platform portal complements the concepts used by PDPA, according to the embodiments of this present invention.

Concepts used by PDPA on how personal data may be collected, used or disclosed by organisations:		**How the embodiments of this platform portal invention complements the PDPA & DNC Registry & Spam Control Act:**
Consent	Only with the individual's knowledge and consent, but with some exceptions.	Allows individuals to opt in and/or opt out of "Consent to be contacted" of marketing messages from organisations anytime via this platform portal or directly reply to organisations via medium used to send such messages. Organisations sending marketing messages must always give individuals the option to unsubscribe via the medium used to contact.
Purpose	Appropriate data for the circumstances, and only if they have informed the individual of the purposes for the collection, use or disclosure.	Allows individuals to choose to input types of personal data and method to be contacted. Secured registration and/or login account using One-Time-Password (OTP) via medium of choice, the unique login identity must be either Singapore mobile phone number (to complement DNC Registry) and/or email address (to complement Spam Control Act), any other fields of personal data are optional. Only allows organisations, which have received opt in of "Consent to be contacted" replies from individuals, to contact via choice of medium for marketing messages.
Reasonableness	Only for purposes that would be deemed appropriate to a reasonable person in the given circumstances.	In most situations, organisations only need personal data such as mobile phone number and/or email address to convey marketing messages. All other personal data is optional as it is not essential, unless the individuals choose to become a member of that organisation.

Table showing how the platform portal complements the concepts used by PDPA, according to the embodiments of this present invention.

No similar prior art can be found on World Intellectual Property Organization (WIPO) or the internet on using a secured One-stop Solution Platform Portal with classified directory of local organisations, which is available for individuals to easily select organisations to opt in and/or opt out of receiving marketing messages anytime, without the hassle of contacting the organisations one by one, thus, saving time and money for both individuals and the organisations.

The only current and prior art which is DNC-related are mostly on those technology related on automatic blocking of DNC contact lists, report immediate complaining system to enforce the DNC Registry and hidden DNC-registered telephone numbers.

Please refer to the PDPA's main website at http://www.pdpa.gov.sg/home for more details.

Summary on Field of the Invention:

The embodiments of the present invention of methods, apparatuses, systems and services for One-stop solution to complement and reinforce compliance to the DNC Registry, PDPA and Spam Control Act, by facilitating the flow of mutual trust, convenient communication and database management, relating to individuals' searches for local organisations and transactions on requests to opt in and/or out of marketing messages, using classified directory database marketing platform for organisations to showcase and market products and/or services in a secured service provider portal for organisations and public individuals and/or consumers to create, update and maintain digital databases, including personal data records of the individuals and/or consumers and corporate data records of organisations, especially regarding the DNC Registry, so that individuals can easily access and opt in and/or opt out of any number of organisations in this One-stop Solution Platform Portal anytime, monitor their past transaction history and address the problem of individuals forgetting whether they have opt in or out of receiving marketing messages from which organisations; while organisations can view, save and response to individuals' requests on consent to be contacted, as well as, manage their marketing messages lifecycle, such as advertisements, announcements, discounts, promotions, promotional codes, electronic brochures, electronic coupons, electronic forms, such as feedback, membership, lucky draws and surveys, using an online network management system, which can be accessed freely by public.

The embodiments of this innovative platform portal connects individuals, such as users or consumers, and organisations in a more accurate, accessible, efficient, transparent, time-saving, up-to-date, secured, convenient, comfortable communication and mutual environment between the individuals and organisations. The embodiments of this useful platform portal will provide solutions to the potential possible or future problems created since implementing DNC Registry and problems related to the Spam Control Act. Refer to FIG. 1 for the Overview of Flowchart diagram of an illustrative process of using the One-stop Solution Platform Portal for the Organisations and Individuals, according to the embodiments of this present invention.

In an embodiment of this present invention of a method, apparatuses, systems and services, for complementing the DNC Registry and Spam Control Act, by reducing unwanted telemarketing calls, fax and text messages and emails, comprising of a platform portal, which is available online and its mobile applications, which can be downloaded online into users' mobile devices such as mobile phones and tablets, personal laptops or computers. The platform portal is for individuals and/or consumers from the public, to register a free account as members to input personal data and select communication modes, which they are comfortable to give consent to be contacted by organisations regarding marketing messages, update and manage own accounts, including personal data.

In another embodiment of this present invention of a method, apparatuses, systems and services to complement DNC Registry and Spam Control Act, comprises the process of an individual registering for a free account via the online platform portal and/or downloaded mobile applications which are installed into mobile devices. Individuals will select his or her

preferred communication modes, which is using either own email address and/or Singapore registered mobile phone number as the unique login identity. The secured system issues One-Time-Password (OTP) to the respective email and/or mobile phone number, according to the medium chosen to apply with and that individual must input the OTP before proceeding to account login. This process must be repeated at every subsequent login either online or through the downloaded mobile applications which are installed into the mobile devices, in order to maintain high security measures and authenticate him or her as the real account owner of the mobile phone number and/or email address.

In an embodiment of this present invention of a method, apparatuses, systems and services, comprises a portal for the login members to easily opt in and/or opt out of marketing messages anytime, by selecting which organisations to opt in and/or opt out of receiving marketing messages via a Search engine available on the online platform portal or the mobile devices installed with mobile applications, either from specific organisations and/or categories, based on members' preferences or interests or other reasons, which can change over time due to change in life stages.

In another embodiment of this present invention of a method, apparatuses, systems and services, comprises of members' platform portal available online and on the installed mobile applications on the mobile devices, which allows the members' account to generate a transaction history, whenever there is an action of opt in and/or opt out, to view and save their past transaction history on previous opt in and/or opt out actions on which organisations and/or categories that they have made requests for "Consent to be contacted".

In some embodiments of this present invention of a method, apparatuses, systems and services, comprises of registered organisations' (corporate members) account, which is available online and on mobile devices installed with the mobile applications, which allows them to receive requests of opt in and/or opt out from individuals at real time in the accounts' transaction history or receive a full report at the end of the day via corporate email if there is any requests for that day, process their requests by sending an notification to acknowledge the individuals' requests and update accordingly in the contact list groups of either contactable or not contactable groups in the database. The organisations can generate a past transaction history from the account, whenever there is a requests of opt in and/or opt out from individuals, to view their past transaction history on previous opt in and/or opt out actions by individuals and save a copy of the past transaction history in Portable Document Format (PDF) file.

In another embodiment of this present invention of a method, apparatuses, systems and services, comprises of members' platform portal, which is available online and on mobile devices installed with the mobile applications, which allows the members to tick on the "Unsubscribe" checkbox shown besides past transaction history to easily unsubscribe to previous opt in and/or opt out actions. This simplifies the "undo" process and saves time that is needed to search for those organisations using Search Engine.

In the embodiment of this present invention of a method, apparatuses, systems and services, comprises of a classified directory of businesses or organisations, which is available online and on mobile devices installed with the mobile applications, showing their contact details and latest promotions, as well as, allows individuals and/or members to opt in and/or opt out of "Consent to be contacted", by ticking on "Opt in" and/or "Opt out" checkboxes shown on all organisations' business profile.

In an embodiment of this present invention of a method, apparatuses, systems and services, comprises of a classified directory of businesses or organisations, which is available online and on mobile devices installed with the mobile applications, which allows public users such as individuals and/or members to choose which communication modes to opt in and/or opt out of receiving marketing messages. Users can either enter "email address" and/or the "mobile phone number", then tick checkboxes to receive via "voice calls" and/or "text messages (including SMS and/or MMS) if using mobile phone number for the communication medium. This is shown below the "Consent to be contacted" on all organisations' business profile.

In the embodiment of this present invention of a method, apparatuses, systems and services, comprises of a classified directory of businesses or organisations, which is available online and on mobile devices installed with the mobile applications, allows visitors who are non-members to automatically become members of the portal, when they choose to opt in and/or opt out of "Consent to be contacted", by ticking on the "Opt in" and/or "Opt out" checkbox shown on all organisations' business profile on the classified directory, followed by entering "email address" and/or the "mobile phone number" as the unique login identity, then tick checkboxes to receive via "voice calls" and/or "text messages (including SMS and/or MMS) if using mobile phone number for the communication. Once visitors click "Submit", system issues OTP from server to visitors' designated unique login identity and visitors must input the OTP to proceed with action to opt in and/or opt out, and automatically login to member's account.

In another embodiment of this present invention of a method, apparatuses, systems and services, comprises of a classified directory of businesses, which is available online and on mobile devices installed with the mobile applications, allows organisations to register as member and create an account, based on the types of plans and features chosen for the business profile published on the classified directory for the public and/or members to opt in and/or opt out of marketing messages

In another embodiment of this present invention of a method, apparatuses, systems and services, comprises of a classified directory of businesses, which is available online and on mobile devices installed with the mobile applications, allows registered organisations to create a personalised business profile, similar to a summarised version of all essential information, comprising of organisation information and marketing messages but not limited to the following materials, such as contact details, announcements such as promotions, opening of new outlets or closed for holidays, website links such as the main homepage and online shop, category of business and/or products and services, business types, upload

organisation logo and upload images such as coupons and brochures for public to use, create electronic forms such as feedback forms, memberships form, lucky draw forms and survey forms, which are all available for the public visitors and members, to view all the information on the business profile and/or use the coupons at the online shop and/or in-stores.

In some embodiments of this present invention of a method, apparatuses, systems and services, comprises of mobile applications, the mobile applications which are downloaded and installed into mobile devices are able to perform all the above embodiments and can be available online and/or offline modes. However, users need to be online when they need to download the mobile applications into their mobile devices, when they want to view real-time updated information on the platform portal and when they need to synchronize the mobile applications with the platform portal and/or whenever there is any changes made to their account that need to be updated with the system.

Refer to FIG. 2 showing the Flowchart diagram of the One-stop Solution Platform Portal for personal data management, according to the embodiments of this present invention.

Brief description of the drawings

Illustrative embodiments of the present invention are described in details below with reference to the attached drawing figures:

FIG. 1 Overview of Flowchart diagram of an illustrative process of using the One-stop Solution Platform Portal for the Organisations and Individuals, according to the embodiments of this present invention;

FIG. 2 Flowchart diagram of the One-stop Solution Platform Portal for personal data management, according to the embodiments of this present invention;

FIG. 3 Flowchart diagram of Registration module, according to an embodiment of this present invention;

FIG. 4 Flowchart diagram showing problems and solutions to the DNC Registry and Spam messages, according to the embodiments of this present invention.

Detailed description

The present disclosure relates to the embodiments of this present invention of methods, apparatuses, services and systems to complement and reinforce compliance to Do Not Call (DNC) Registry and Spam Control Act, by creating One-stop Solution Platform Portal, facilitating individuals' searches for organisations to opt in and/or opt out of marketing messages and providing past transactions history on requests to opt in and/or opt out of marketing messages, using a secured platform with classified directory of businesses and serve as a service provider portal for organisations and individuals, which includes but not limited to, web-based, electronic, mobile, online and/or offline applications, to create, update, manage and maintain digital databases, including personal data records of the general public users, who are individuals and/or consumers and corporate data records of organisations, especially regarding the DNC Registry under the Personal Data Protection Act (PDPA) in Singapore and similar laws in other countries and states, so as to facilitate the flow of mutual trust, convenient communication, database management, such as updates on contact information by individuals and organisations, individuals requests to opt in and/or opt out of consent to be contacted by organisations and view past transaction history of actions done; while organisations can view, save and response to individuals' requests on consent to be contacted, as well as, manage their marketing messages lifecycle, such as advertisements, announcements, discounts, promotions, promotional codes, electronic brochures, electronic coupons, electronic forms, such as feedback, membership, lucky draws and surveys, using an online network management system, which can be accessed freely by public.

The embodiments of this innovative platform portal connects individuals, such as users or consumers, and organisations in a more accurate, accessible, efficient, transparent, time-saving, up-to-date, secured, convenient, comfortable communication and mutual environment between the individuals and organisations.

There are underlying potential problems related to DNC Registry, such as individuals want to opt in and/or opt out of specific marketing messages from certain categories or fields based on personal interests which may change with time, but realise it is difficult and time-consuming to search for and contact the organisations one by one to give or remove consent, thus, may miss out informing some of the organisations, regarding their latest choice of preference, so resulting in loss of potential revenues for these "forgotten" organisations; or some individuals gave or removed consent to some organisations since start of DNC provisions in January 2014, but have lost track and forgotten their past actions and find it troublesome to contact these organisations one by one to check status of consent and personal data; breaches may go unnoticed as individuals may not report any breaches due to the fact they are not sure about the process to complain and/or not fully understanding the PDPA and DNC Registry, and in event of a complaint, organisations have the "benefit" since they usually have records and have the chance to tamper with the database due to the fear of penalties involved and complaining individuals are at a "disadvantage" since they may have accidentally deleted the marketing message or call logs and have no record to show proof upon request by the authorities.

On the other hand, it is also possible for individuals to accuse organisation of a breach as they have forgotten whether they given any consent to that particular organisation, resulting in loss of trust, thus, resulting in unfair treatment, such as loss of reputation and investigations, for that "accused" organisations from the authorities. These are just some examples of potential problems likely to arise in the future or have started since implementing DNC Registry. The list of problems can be hidden, far-fetched and unlimited.

With the embodiments of this present invention, both organisations and individuals can have a peace of mind since they can access their past transaction history in this unbiased and mutual service provider platform portal, in the event of any complaint. This embodiments of this present invention aims to solve underlying problems, while complementing DNC Registry and Spam Control Act, by providing this One-stop Solution Platform Portal as a secured service provider portal for organisations and individuals on a classified businesses directory platform, using an online network management system and database marketing according to individuals' preferences, thus, improving the overall efficiency and effectiveness of marketing products and services, as marketing messages are only conveyed to individuals, who are interested in the products and/or services by those organisations which they have given consent to be contacted, hence reducing unwanted telemarketing and spam messages via the various communication modes.

Those individuals who do not wish to leave any personal data are allowed to visit our platform portal without registering an account, as public can still access the website portal without being a member, and continue to view and benefit from the promotions available from all organisations listed on the classified directory on the platform portal.

In order for the embodiments of this invention of One-stop Platform Portal to complement PDPA, individuals should register their Singapore telephone with DNC Registry first, then proceed to our website to use the members' portal directly or download and install the mobile applications into their mobile devices, in order to perform the necessary actions such as manage own personal data, update preferences to choose which categories or organisations to opt in and/or opt out of receiving marketing messages and view past transaction history of actions done previously.

Once they enter their personal account, they can fill up individual personal data, such as name, email and birthday dates if they like to enjoy birthday-related promotions, but all fields are optional, except for the medium they wish to receive marketing messages. If they only want to receive such messages via email, they only need to enter their email and no telephone number is needed. This is to complement the Spam Control Act and reduce spam messages. If they only want to receive via mobile phone number, they need to choose the communication modes via voice calls and/or text messages and enter the Singapore registered mobile number to comply with DNC Registry. If they want to receive such messages via mobile phone number and email, they will need to fill up both fields, to comply with DNC Registry and Spam Control Act.

The benefits of the embodiments of this present invention are not limited to the individuals, but can also help organisations. This is a win-win situation for both individuals such as consumers and organisations. As in the long run, this type of targeted database marketing on potential consumers, who have indicated interests on the products and/or services would enable individuals to receive only useful and related marketing messages via the mode of communication they prefer to be contacted, thus, reducing spam messages, as well as, help organisations save time and money to reach out to potential consumers and on unnecessary expensive multimedia advertisements.

The principles of the present invention utilize a classified directory of businesses with products and/or services, which need non-stop marketing and the platform portal allows organisations to register account online with an annual subscription fee, in order to create a business profile on the platform, which serves as a summarised version of essential information, which includes but not limited to the following information, such as the contact details of the business, business registration number, name, category of products and/or services, announcements (such as any promotions including promotion codes, opening new outlet, change of opening hours or closed for holidays etc.), upload organisation logo, photos and/or scanned documents such as brochures or coupons (which is available to public to view and use at online shop or in-stores), electronic forms such as feedback, membership, lucky draw and survey, a hyperlink to their website homepage or online shop (for visitors and/or members to visit, shop and use promotion codes shown on "Announcements") and most importantly, option for individuals to opt in and/or opt out of " Consent to be contacted" to receive marketing messages and via which modes of communication.

Account opening requires the organisations' name, contact details, business address and business registration number. By opening an account, organisations will be able to perform the above actions and get informed immediately in their accounts via the past transaction history of any requests from individuals regarding their "Consent to be contacted" and the modes of contact (option of voice calls and/or mobile text messages) and, notify and acknowledge individuals' requests of opt in and/or opt out of receiving marketing messages, update their internal database for the contactable name list. Organisations will have a record in their account showing daily updated requests, past transaction history and can update their internal marketable contact list to comply with PDPA. The organisations can download and save the past transaction history of individuals' requests as Portable Document Format (PDF) files. If organisations wish to receive a daily update at the end of a time frame, such as end of the day or week, via Excel file to their own corporate email instead of the organisations' portal account email, the system can also perform the requests for compiled results.

In order for the embodiments of this invention to complement DNC Registry, individuals must register their Singapore mobile phone numbers with DNC Registry first, else in the event of a breach where organisations sent marketing messages, the individuals cannot file a complaint as they are not listed on the DNC Registry for the act to apply on that organisations.

Individuals, who are DNC-registered, can then proceed to this platform portal to sign up account and join as member for free; registration can be done easily with minimum personal data, by using either their Singapore mobile phone numbers registered with DNC Registry or email address as the unique login identity. To ensure security and confirm proof of account holder of the mobile number and/or email, the system issues a single One-Time-Password (OTP) which will be sent to the medium (mobile phone number or email) used to register this account for account opening and for every login. Individuals must input the OTP sent to them onto a pop-up box, which asks for the OTP and states the Terms and Conditions for entering the OTP for account sign-up or sign-in, in order to proceed with the sign-up and/or login. Once account is opened, individuals can login via the unique login identity chosen and OTP will be sent at every login to secure authentication, they can choose to input other optional personal data, such as email (if they initially registered using mobile phone number), name, birthday date if they wish to receive promotions related to birthday. If they initially registered using the email address, they can input their mobile phone numbers if they like to receive marketing messages through this mobile phone number as the medium of communication and then select the modes of communication via mobile phone number, which can be voice call and/or text messages, which includes MMS and SMS. Refer to FIG. 3 for the Flowchart of Registration module, according to an embodiment of this present invention.

The default setting is via text messages for individuals who did not select or forget to select as it is believed that voice calls tend to be more undesirable and can be more disturbing to recipients. If members fill up both mobile phone number and email address in the account, they can login account via either medium of communication, so long as they input the OTP, which will be sent to the medium they use as the unique login identity for account login.

Members can go to the classified directory to search and select fields of interest or categories to opt in and/or opt out. Search can be done via alphabetical order, categories, names of business or products and/or services. The purpose of the embodiments of this invention is in line with the DNC Registry, since individuals should have registered their phone numbers to stop receiving marketing messages from at least 1 mode of communication (voice calls, text or fax messages), so default setting is for members to select opt in to receive marketing messages.

One such scenario for members to save time is to login first, then tick “Select all opt-in” checkbox and uncheck all those categories which they are want to opt out of receiving marketing messages, then click “Next” to proceed to confirm the lists of organisations that members are giving “Consent to be contacted”, check and ensure there is no error then click “Ok” to confirm. As members are already login, the system captures their unique login identity (such as email address and/or mobile telephone numbers, which they have selected as their preferred communication mediums) and submits the personal data together with the individual member’s requests to the organisations selected for the opt in and/or opt out actions, notifications will be sent to the individual’s and the selected organisations via account past transaction history, such as a confirmation message will be sent to transaction history in members’ account and the respective organisations’ account on this platform portal. The organisation chosen by members to send marketing messages will also receive a

confirmation message at the same time and/or receive a full report at end of the day of all requests to opt in and/or opt out of receiving marketing messages.

It is the organisations' duty to acknowledge individuals' requests to opt in by sending them a notification that their "consent to be contacted" has been received and will be receiving marketing messages from this date on, and inform them that, unless they chose to unsubscribe via the medium of communication initially approved to send marketing messages, they will continue to receive marketing messages. It is also the organisations' duty to notify those individuals who opt out that they have received the "opt-out" requests and acknowledge their requests to opt out of receiving marketing messages from that date on.

For members who have previously given consent to some organisations, but now decided to remove consent due to change in preference or other reasons, can also do so on this platform portal. As it is unlikely that members gave consent to too many organisations since DNC Registry is implemented recently, they can login first, then search for those organisations by name, tick the checkbox "opt out" for "Consent to be contacted" of all those organisations that members now want to remove consent. Click "Next" to confirm the lists of organisations that members are removing "Consent to be contacted", check and ensure there is no error then click "Ok" to confirm. A confirmation message will be sent to transaction history in members' account. The organisation chosen by members to stop sending marketing messages will also receive a confirmation message at the same time and/or receive a full report at the end of the day of all requests to opt in and/or opt out. It is the duty of the organisations to check carefully the messages that are sent to them to notify them of the changes of individuals' consent to opt in and/or opt out of receiving the marketing messages and update accordingly to avoid delays, confusion or breach of DNC Registry. Organisations should take the extra effort to inform individuals that they have received the notifications and will update their requests accordingly to comply with PDPA. The system will send notifications to organisations to remind them to update their internal database and perform the necessary actions, according to individuals' requests to opt in and/or opt out of marketing messages.

Members have two methods to opt in and/or opt out of consent anytime, they can choose to opt in and/or opt out via the classified directory by using the Search engine to find the categories or organisations to opt in and/or opt out of receiving marketing messages, then ticking the appropriate checkbox of their preference; or they can do so via individual's account transaction history, which give them the choice to tick the "Unsubscribe" checkbox to previous "opt in" or "opt out". By doing so, the action done will also be updated in the accounts' past transaction history, which can be saved as PDF file. Thus, saving time spent on searching that organisation from the classified directory.

If a visitor decided to opt in and/or opt out of "Consent to be contacted" of a specific organisation, he or she can do so on the classified directory, search and select that organisation, fill in the box asking for mobile phone number and/or email address as the unique login identity and as medium of communication, if visitor choose mobile phone as medium then he or she must indicate mode of communication which is via voice call and/or mobile text messages, tick the checkbox to "opt in" or "opt out" of "Consent to be

contacted", if this is left uncheck, default setting will be mobile text messages, click "Next", OTP sent to choice of medium, a pop-up box will prompt the visitor to input the OTP which states the Terms and conditions for entering the OTP to sign-up or sign-in account, in order to proceed with action to opt in and/or out. By doing so, the visitor automatically becomes a member as stated on the Terms and Conditions when entering the OTP and is considered as automatic account sign-up and immediate account sign-in; his mobile phone number and/or email address will be his unique login identity for his member's account.

The sign-up and/or sign-in processes are inventive steps as this method allows individuals, who are initially non-members and non-consumers, to register their mobile phone number as the unique login identity and receive an OTP to ensure security and proof of identity as owner of that mobile phone number, input OTP to proceed account activation and/or at every account login; or use an email address as login identity, receive OTP via email, input OTP to proceed account activation and/or each account login. This is an essential security measure to prove identity and secured authentication, in order to comply with PDPA and complement the DNC Registry. The method using email address also helps to solve problems related to email spamming and comply with the Spam Control Act.

The prior similar art is the case of telecommunication companies, which already have personal data of consumers who have purchased products and/or services from the telecommunication shops, so it is obvious to expect existing members and/or consumers to use mobile phone number or identity number as login identity; and then sending the OTP to the mobile phone number, for them to login to existing consumers' member account.

If a member did not login, but wanted to opt in and/or opt out of "Consent to be contacted" of a specific organisation, he or she can do so on the classified directory, the actions required will be similar to the non-member visitor's case shown above. The transaction history will still show the action done via this method.

All transaction history can be saved as Portable Document Format (PDF) files for individuals and organisations to keep a record. This is important especially for individuals who want to delete account, as all data will be lost after account deleted, so it is the duty of individuals to ensure they have saved a copy for future reference. Individuals can delete their account anytime, by clicking on "Delete account", system will prompt for confirmation by sending OTP for the member to input onto the pop-up box, followed by clicking "Confirm". By doing so, the individual is no longer a member, unless he or she choose to sign-up or login again.

Therefore, it is timely and essentially useful to have the embodiments of this invention and/or inventive steps to complement and reinforce compliance to the DNC Registry and Spam Control Act, simplify the method for individuals to monitor their own transaction history of opting in and/or out of marketing messages from selected organisations and allow organisations to comply with PDPA by updating the requests or replies from the public on whether they opt in and/or opt out of their "Consent to be contacted". Refer to FIG. 4 on the Flowchart showing problems and solutions to the DNC Registry and Spam messages, according to the embodiments of this present invention.

Claims

1. A method, apparatuses, systems and services, for complementing and reinforcing compliance to the DNC Registry and Spam Control Act, by reducing unwanted spam emails, telemarketing calls and text messages, comprising of a platform portal;

    a. available online and/or;
    b. via mobile applications, which can be downloaded online and installed into mobile devices;
    c. available for public users such as;
        - individuals;
        - consumers and/or;
        - members;
    d. allows public users to register a free account as members, using their unique login identity, which can be the following;
        - email address and/or;
        - mobile telephone number;
    e. allows members to perform the following actions, such as;
        - to input personal data;
        - update account information;
        - manage own accounts and/or;
        - view and save transaction history;
    f. allows members to select the personal data in their account, which they are comfortable to give consent to be contacted by organisations, regarding communication of marketing messages, such as;
        - Name (optional);
        - Birthday date (optional, unless they want to receive marketing messages for birthday-related promotions);
        - Email address (optional, unless they choose this medium as one of their preferred communication medium);
        - Mobile telephone number (optional, unless they choose this medium as one of their preferred communication medium) ;
    g. only one communication medium is needed for members to receive marketing messages from organisations, which can be either email address or mobile telephone number;
    h. but members must input mobile telephone numbers if they are choose to opt in and/or opt out of marketing messages; so that organisations can update their internal Do-Not-Call corporate database, so as to comply with DNC Registry;
    i. members must select communication medium, which they are comfortable to give consent to be contacted by organisations, regarding the communication of marketing messages via;
        - email and/or;
        - mobile telephone numbers;

j. if members select mobile telephone numbers as medium; they must select the communication modes via;
   - voice calls;
   - mobile text messages; including SMS and/or MMS;

k. if members did not select or forget to select communication modes when they choose opt-in "Consent to be contacted", the default setting will be via mobile text messages for the marketing messages, which is less disturbing to the recipients receiving such messages.

2. A method, apparatuses, systems and services to complement DNC Registry and Spam Control Act, according to claim 1, which comprises the process of ;

   a. public users, who are individuals, registering for a free member account via;
      - online platform portal and/or;
      - mobile applications, which can be downloaded online and installed into mobile devices;
   b. individuals select their preferred communication medium and modes;
   c. individuals input their unique login identity as the preferred communication medium via;
      - email address and/or;
      - locally registered mobile phone number;
   d. secured system issues One-Time-Password (OTP) to the respective medium, according to the medium that the individuals have chosen to apply with;
      - email address and/or;
      - mobile phone number;
   e. individual must input the OTP onto a pop-up box, which states the Terms and Conditions for entering the OTP, used for account sign up and/or account sign-in or delete account, before proceeding to account login;
   f. process must be repeated at every subsequent login, which is available online and/or through mobile devices installed with the mobile applications;
   g. member can choose to delete the account by clicking on the "Delete account", system will send OTP via the preferred medium used during sign-up and/or sign-in account, a pop-up box with the Terms and Conditions for entering OTP prompts the member to input the OTP, member must input the OTP and click "Confirm" to proceed with deleting the member account.
   h. the above process for account registration and deletion is essential, in order to maintain high security measures and authenticate that the identity of the individual as the real account owner of;
      - mobile phone number and/or;
      - email address.

3. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 1, which comprises the members' portal, for the login members;

a. to easily perform the "Consent to be contacted" requests of receiving marketing messages anytime, which is;
    - available on the online platform portal and/or;
    - mobile devices installed with mobile applications,
b. "Consent to be contacted" requests for receiving marketing messages can be the following actions which are;
    - opt in and/or;
    - opt out;
c. members can select their choices via a Search engine to perform the actions of "Consent to be contacted" of receiving marketing messages, which can be the following actions for;
    - opt in and/or;
    - opt out;
d. default setting in account is for members to select opt in to receive marketing messages since most members should have registered with DNC Registry;
e. login member then tick "Select all opt-in" checkbox and uncheck all those categories which they want to opt out of "Consent to be contacted" to receive marketing messages;
f. then click "Next" to proceed to confirm the lists of organisations that members are giving "Consent to be contacted";
g. check and ensure there is no error then click "Ok" to confirm action;
h. system captures the sign-in members' unique login identity, which they have selected as their preferred communication mediums such as;
    - email address and/or;
    - mobile telephone numbers;
i. system submits the personal data together with the individual member's requests to the organisations selected for the opt in and/or opt out actions;
j. notifications will be sent to the individual's and the selected organisations via the respective accounts' past transaction history;
k. notifications such as the requests' confirmation messages will be sent to the transaction history in members' account and the respective organisations' account;.
l. the organisation chosen by members to send marketing messages will also receive;
    - a daily updated real- time confirmation message and/or;
    - full report at end of the day of all requests to opt in and/or opt out of receiving marketing messages.
m. members can select their actions, according to;
    - specific organisations and/or;
    - categories based on members' preferences, such as;
        - interests or;
        - other personal or hidden reasons and/or;
        - changes over time due to changes in life stages.

4. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 3, which comprises of members' platform portal;

    a. available online and/or;
    b. mobile devices installed with mobile applications;
    c. system sends notifications of members' "Consent to be contacted" requests for marketing messages to;
        - members' account and;
        - chosen organisations' account;
    d. system generates real-time, daily updated and past transaction history, whenever there is any action of "Consent to be contacted" requests for opt in and/or opt out of marketing messages;
        - members' account and;
        - chosen organisations' account;
    e. members and organisations can save a copy of accounts' past transaction history in Portable Document Format (PDF) file;
    f. members can view their past transaction history on previous actions of opt in and/or opt out of "Consent to be contacted" requests on which;
        - organisations and/or;
        - categories.

5. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 1, which comprises of the Organisations' Portal;
    a. registered organisations users (corporate members) account;
        - available online and/or;
        - mobile devices installed with the mobile applications;
    b. allows organisations to receive real-time daily updated requests from individuals, who are members, when they perform the following "Consent to be contacted" requests of receiving marketing messages, which can be the following actions;
        - opt in and/or;
        - opt out;
    c. daily updates for current and past transaction history in Organisations' accounts or;
    d. organisations can choose to receive a full report;
        - via Excel file;
        - at the end of the day and/or;
        - send to their corporate email, if there is any requests for that day;
    e. system
        - sends notifications to organisations, whenever there is any "Consent to be contacted" requests from individuals, which can be;
            - opt in and/or;

        - opt out;
    - generates a transaction history in the account;

f. Organisations can view their past transaction history on previous actions by individuals, which can be;
    - opt in and/or;
    - opt out;

g. Organisations can save a copy of the past transaction history in Portable Document Format (PDF) file;

h. after receiving the individuals' requests, system will send notifications to the chosen organisations' account to remind them to;
    - process individuals' requests;
    - send an notification to individual;
    - acknowledge the individuals' requests;
    - update the individuals' requests accordingly, in their database for the contact list groups;
        - contactable list or;
        - "Do Not Call" list.

6. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 4, which comprises of members' platform portal;
    a. available online and/or;
    b. mobile devices installed with the mobile applications;
    c. allows the login members to tick on the "Unsubscribe" checkbox, which is shown besides every chosen organisation in the past transaction history in the members' account;
    d. login members can easily unsubscribe to previous actions of "Consent to be contacted" requests for marketing messages, which can be;
        - opt in and/or;
        - opt out;
    e. this "unsubscribe" checkbox in the account simplifies the "undo" process;
    f. notifications of the "unsubscribe" requests will be send to the respective transaction history, shown on the chosen organisations' accounts and the members' accounts.
    g. this method helps save time, which is needed to search for those organisations using Search Engine.

7. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 1, comprising of;

    a. classified directory of businesses or organisations;
        - available online and/or;
        - mobile devices installed with the mobile applications;

b. classified directory shows organisations' Business profile, which allows the actions of opt in and/or opt out of "Consent to be contacted" requests by;
    - individuals and/or ;
    - members;
c. this action can be done by ticking on "Consent to be contacted" checkboxes shown at every Business profiles for individuals and/or members to perform action, which can be;
    - "Opt in" and/or;
    - "Opt out";
d. Notifications will be send to the respective accounts' transaction history for;
    - chosen organisations and;
    - members, who performed the actions.

8. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 7, comprises of a classified directory of businesses or organisations;

a. available online and/or;
b. mobile devices installed with the mobile applications;
c. allows public users to choose which communication modes to receive opt in and/or opt out of "Consent to be contacted" requests for marketing messages, which can be;
    - non-member individuals and/or;
    - members, who have not yet login account;
d. they choose the communication medium and modes;
e. then choose and enter unique login identity;
    - "email address" and/or;
    - "mobile phone number";
f. followed by ticking the respective opt in and/or opt out requests of "Consent to be contacted" checkboxes to receive marketing messages;
g. if they use the mobile phone number, they must select the communication modes via;
    - "voice calls" and/or;
    - "text messages, including SMS and/or MMS;
h. the communication medium and modes will be shown at "Consent to be contacted" on all organisations' business profiles.
i. the secured system issues OTP to the respective medium, according to the medium that the individuals or members have chosen to apply with;
    - email address and/or;
    - mobile phone number;
j. individual must input the OTP onto a pop-up box, which states the Terms and Conditions for entering the OTP, used for account sign up and/or account sign-in or delete account, before proceeding to account login;

k. if members did not select or forget to select communication modes when they choose opt-in "Consent to be contacted", the default setting will be via mobile text messages for the marketing messages, which is less disturbing to the recipients who are receiving such messages.
l. Notifications will be send to the respective accounts' transaction history, if there is any requests done for "Consent to be contacted" for marketing messages, which will be send to the;
    - chosen organisations' accounts and;
    - members' accounts.

9. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 8, comprises of a classified directory of businesses or organisations;

a. available online and/or;
b. on mobile devices installed with the mobile applications;
c. allows visitors, who are non-members, to automatically become members of the portal;
d. when visitors choose to act on "Consent to be contacted" requests to receiving marketing messages, which can be the following actions;
    - opt in and/or;
    - opt out;
e. by ticking on the checkboxes shown on organisations' business profiles on the classified directory, which can be the following actions:
    - "opt in" and/or;
    - "opt out";
f. visitors enter the unique login identity, which can be;
    - "email address" and/or;
    - "mobile phone number";
g. visitors tick the checkboxes if using mobile phone number as the unique login identity, to select the communication modes via:
    - "voice calls" and/or;
    - "mobile text messages, including SMS and/or MMS;
h. once visitors click "Submit";
i. system issues One-Time-Password (OTP) from server;
j. OTP will be send to the visitors' preferred communication medium, which is the selected unique login identity;
k. visitors must input the OTP onto the pop-up box, which states the Terms and Conditions for entering the OTP, used for account sign up and/or account sign-in or delete account, before proceeding to account sign-up and login;
l. the above steps must be carried out to proceed with action of "Consent to be contacted" requests, which can be the following actions:
    - opt in and/or;
    - opt out,

m. by doing the above, the visitors automatically:
    - sign-up as members and;
    - sign-in to members' account.

10. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 7, which comprises of a classified directory of businesses;

    a. available online and/or;
    b. on mobile devices installed with the mobile applications;
    c. allows organisations to;
        - register as member and;
        - create an organisations' account;
    d. the organisations' accounts are created based on the types of plans and features chosen for the business profile;
    e. the organisations' business profile will be published on the classified directory;
    f. the business profiles allow organisations to receive opt in and/or opt out of "Consent to be contactable" requests on marketing messages for the following users, such as:
        - members and/or;
        - public (non-members) who will become members if they follow the steps in claim 9 for visitors.

11. A method, apparatuses, systems and services, to complement DNC Registry and Spam Control Act, according to claim 10, comprises of a classified directory of businesses;

    a. available online and/or;
    b. on mobile devices installed with the mobile applications;
    c. allows registered organisations to create;
        - personalised business profile and;
        - summarised version of all essential information;
    d. all the information on the business profiles are available for viewing by;
        - public visitors and/or;
        - members;
    e. the business profiles comprises the;
        - organisation information and;
        - marketing messages but not limited to the following materials;
    f. such as contact details, including but not limited to the following;
        - Business name;
        - Business type/ field;
        - Category of products and/or services;
        - Registration number

g. announcements, including but not limited to the following;
   - promotions, promotional codes;
   - opening of new outlets;
   - closed for holidays;

h. website links, including but not limited to the following;
   - main homepage;
   - online shop;

i. upload organisations' logo and;

j. upload images related to promotions, including but not limited to the following;
   - coupons;
   - brochures;

k. create electronic forms, including but not limited to the following;
   - feedback forms;
   - membership forms;
   - lucky draw forms and;
   - survey forms;

l. all information on the organisations' business profiles are available for viewing and use by;
   - public visitors and/or;
   - members.

m. members and visitors can use promotion-related materials at the following;
   - online shop and/or;
   - in-stores shopping.

12. A method, apparatuses, systems and services, for complementing the DNC Registry and Spam Control Act, by reducing unwanted spam emails, telemarketing calls and text messages, according to claim 1 to 11, comprising of the;

a. "One-stop solution" mobile applications downloaded online and installed into mobile devices;
b. the mobile applications can perform all the above claims 1 to 11 embodiments;
c. the mobile applications can be available via;
   - online and/or;
   - offline modes.

d. but users need to be online during the following actions;
   - when they need to download the mobile applications into their mobile devices;
   - when they want to view real time updated information on the platform portal and;
   - when they need to synchronize the mobile applications with the platform portal and/or;
   - whenever there is any changes made to their accounts, which need to be updated with the system.