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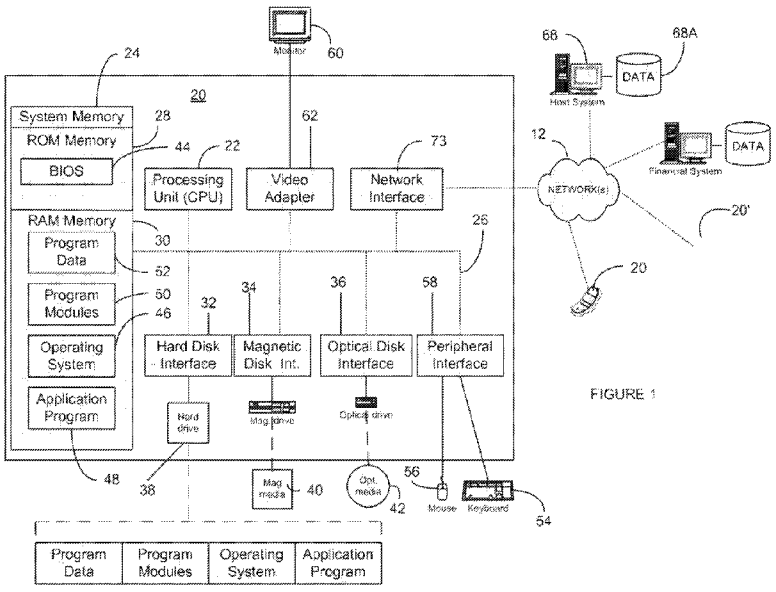


FIGURE 1

(57) Abstract: A mower may be specifically recommended for a user based on received data associated with a yard of the user. The method may include providing a computing device for a user, and receiving, using the computing device communicating with a computer over a network, particular parameters about the user's yard. The user's yard parameters may be 5 compared with product parameters of mowers stored on a database associated with a retailer. Using the particular parameters about the user's yard received from the computing device, at least one mower matched with the user's needs. The recommendation of the at least one mower may then be provided to the user.

OUTDOOR POWER EQUIPMENT RECOMMENDATION TOOL

CROSS REFERENCE TO RELATED APPLICATIONS

The present application claims priority to U.S. patent application number 62/098,778 filed December 31, 2014, which is expressly incorporated by reference in its entirety.

BACKGROUND

Outdoor tasks, such as grooming and maintaining property, are commonly performed using various outdoor power equipment that is configured for the performance of corresponding specific tasks. For example, outdoor power equipment, such as a riding lawn mower, may used be for cutting grass or collecting leaves.

Outdoor power equipment is popular with many people due to the various features thereon, and the demand for such devices having improved functionality will likely grow.

However, current outdoor power equipment is not tailored to consumers and thus, consumers will purchase products that do not fit the consumer's needs and/or desires.

BRIEF SUMMARY OF SOME EXAMPLES

Accordingly, in order to improve operator satisfaction in connection with purchasing and using outdoor power equipment (e.g., a mower), some example embodiments may generally relate to systems, such as a retail systems for collecting data points from a customer and for using the collected data points to provide a customer with customer specific product and/or service offerings, customer relevant information, and the like.

In some embodiments, the system may be software on smartphone, in kiosk at dealer, in tractor-attachment, etc. that receives variables associated with your particular lawn. The tool then determines which product (e.g., walk behind, zero turn, tractor, as well as which product within these categories, etc.) is the best fit for the user. Inputs may relate to limiting factors like a gate width and/or curb size that must be traversed. The output may show the user how long it would take her to mow her yard with different products (e.g., two hours with a walk-behind, but 30 minutes with a zero turn, etc.), how much horsepower the user really needs, etc. There may be various inputs (e.g., trees, terrain, yard size, actual mowing area, water, etc.) Satellite imagery tied to your address may be a first input, followed by manual markups to indicate where known obstacles are located. In some embodiments, the tool can be attached to your existing lawn mower and receive/record information about your mowing experience.

In another example embodiment, a mower may be specifically recommended for a user based on received data associated with a yard of the user. The method may include providing a computing device for a user, and receiving, using the computing device communicating with a computer over a network, particular parameters about the user's yard. The user's yard parameters may be compared with product parameters of mowers stored on a database associated with a retailer. Using the particular parameters about the user's yard received from the computing device, at least one mower matched with the user's needs. The recommendation of the at least one mower may then be provided to the user.

In another example embodiment, a method for providing a mower that is specifically recommended for a user based on received data associated with a yard of the user is provided. The method may include providing a computing device for a user, and receiving, using the computing device communicating with a computer over a network, particular parameters about the user's yard. The method may further include comparing the user's yard parameters with product category parameters stored on a database, and determining, using the data from the computing device, at least one product category based on the comparing of the user's yard parameters with product category parameters stored on a database; The user's yard parameters may be compared with product parameters within the at least one product category stored on a database. At least one product within the at least one product category may be determined to be a match for the user based on the comparison of the user's yard parameters with product parameters stored on a database. The recommendation of the at least one product may be output to the user.

In another example embodiment, a system for outdoor power equipment is provided and may include a computing device configured to receive and transmit, to a computer over a network, particular parameters about a user's yard, a display screen to display an interface that solicits information from the user, and a processor in communication with a database associated with a retailer. The processor may be configured for: comparing the user's yard parameters with product category parameters stored on a database; determining, using the data from the computing device, at least one product category based on the comparing of the user's yard parameters with product category parameters stored on a database; comparing the user's yard parameters with product parameters within the at least one product category stored on a database; determining that at least one product within the at least one product category is a match for the user based on the comparing the user's yard parameters with product parameters stored on a database; and outputting a recommendation of the at least one product to the user.

Some example embodiments may improve the ability of operators and/or fleet managers to monitor how efficient the user is using various triggers, events and/or conditions regarding the operation of a lawn care vehicle.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

Having thus described the invention in general terms, reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

FIG. 1 illustrates in block diagram form components of an exemplary system of an outdoor power equipment tool for collecting data from a customer and recommending products to the user in accordance with some embodiments;

FIG. 2A illustrates a flow chart diagram of exemplary steps used to collect data points from a customer and for using the collected data points to provide product recommendations, in accordance with some embodiments;

FIG. 2B illustrates another flow chart diagram of exemplary steps used to collect data points from a customer and for using the collected data points to provide product recommendations, in accordance with some embodiments;

FIG. 3A illustrates an electrical system of a riding lawn care vehicle with short-range wireless capability according to an example embodiment;

FIG. 3B illustrates a graphical user interface of a computer connected with an electrical system for a riding lawn care vehicle according to an example embodiment; and

FIG. 3C illustrates a graphical user interface of a mobile phone connected with an electrical system for a riding lawn care vehicle according to an example embodiment.

DETAILED DESCRIPTION

Some example embodiments now will be described more fully hereinafter with reference to the accompanying drawings, in which some, but not all example embodiments are shown. Indeed, the examples described and pictured herein should not be construed as being limiting as to the scope, applicability or configuration of the present disclosure. Rather, these example embodiments are provided so that this disclosure will satisfy applicable legal requirements. Like reference numerals refer to like elements throughout. Furthermore, as used herein, the term “or” is to be interpreted as a logical operator that results in true whenever one or more of its operands are true. Additionally, the term "lawn care" is meant to relate to any yard maintenance activity and need not specifically apply to activities directly tied to grass, turf or sod care. As used herein, operable coupling should be

understood to relate to direct or indirect connection that, in either case, enables functional interconnection of components that are operably coupled to each other.

General Overview

Prior to going into detail about various embodiments of the present application, described hereinafter is a general overview of a system and method for collecting data points from a customer and for using the collected data points to provide a customer with customer specific product and/or service offerings/recommendations. By way of example, and referring to Figure 2A, the collected data may include data received that is associated with the user's yard including data from guided questions and other data (e.g., data entered by a user about the user's yard or outdoor power equipment, data collected directly from the user's outdoor power equipment, image data relating to the user's yard, etc.), as provided by block 202. In block 204, the system determines which products are recommended as the best fit for the user based on the collected data from block 204. The system then may output the recommended product(s) to the user, in block 206. At block 208, the user may select a particular recommended product to obtain more information about the product, such as information about how long it would take the selected mower to mow the user's yard, the cost of the recommended product, where the recommended product can be purchased, and the like.

In described embodiments, the subject system may reside on a first computing device, such as a tablet or kiosk computing device operated by a retail entity or representative thereof. The recommendation system may capture from the customer answers to posed questions relating to the parameters of the user's yard, such as what is the width of the user's gate or how large is the user's yard.

The received product recommendation may then be stored within a data repository with the recommendation being linked to a customer identifier that is associated with the customer.

While the forgoing provides a general overview of some of the various features and functionalities of the subject invention, a better understanding of the objects, advantages, features, properties, and relationships of the subject invention will be obtained from the following detailed description and accompanying drawings which set forth illustrative embodiments and which are indicative of the various ways in which the principles of the subject invention may be employed.

Detailed Explanations of Various Embodiments

With reference to the figures, the following describes a system and method for collecting data points from a customer, for using the collected data points to provide customer specific offerings/recommendations, incentives, information, and the like, and for rewarding sales associates based upon their involvement in the process.

Turning to Figure 1, illustrated is an exemplary system for collecting data from a customer and for using the collected data to provide enhanced product recommendations specifically tailored for the user in a manner that is described in greater detail hereinbelow. As illustrated, the exemplary system includes a processing device 20 whereby a customer may register with and/or otherwise access an online retail channel hosted by a retailer system 68 associated with one or more retail establishments to, among other things, provide a custom product recommendation and view and purchase a recommended product being offered for sale by the retail establishment(s).

The user may use software employed on various devices, such by an application on the user's smartphone (that is configured to connect with retailer's databases), at a kiosk or other computing device at a retail dealer, on a outdoor power equipment attachment (that could be checked out and plugged into the user's outdoor power equipment to communicate data directly from the user's outdoor power equipment).

As will be appreciated, during the registration process the customer may establish a log-in name/password combination for providing secure and recognized access to the retailer system 68, provide a contact email address, phone number, or other unique identifier, provide demographic information such as age, gender, preferences, interests, etc. The user data may also indicate a physical address where the user lives. The user data may also indicate the identity (e.g., model number, etc.) of any products that the user is known to own either via prior registration of such products or by entry of such products into a product listing.

As a result of the registration process (which may also be done by the customer while online or within the retail establishment), the customer will additionally be associated with a unique customer ID, which customer ID may, but need not, be reflected on a physical and/or digital rewards card that may be provided to the customer. For example, the customer ID may be reflected in a device having a machine readable code, such as a barcode imprinted on a physical rewards card or be otherwise displayable/transmittable via use of a device such as a smart phone. Using the same or another processing device, the customer may additionally receive from the retailer system 68 digital incentives or other communications that will be associated with their customer ID.

While illustrated in the exemplary form of a personal computer, it is to be understood that the processing device 20 may be embodied in any type of device having the ability to execute instructions such as, by way of example only, a personal-digital assistant ("PDA"), a smart phone, a tablet computing device, or the like. Furthermore, while described and illustrated in the context of a single processing device 20, those skilled in the art will also appreciate that the various tasks described herein may be practiced in a distributed environment having multiple processing devices linked via a local or wide-area network, such as the Internet, whereby the executable instructions may be associated with and/or executed by one or more of the multiple processing devices.

More particularly, to provide a means for a purchaser to access the online channel of the retailer(s) (and to perform various tasks as necessary) the processing device 20 may include a processing unit 22 and a system memory 24, which may be linked via a bus 26.

Without limitation, the bus 26 may be a memory bus, a peripheral bus, and/or a local bus using any of a variety of known bus architectures. As needed for any particular purpose, the system memory 24 may include read only memory (ROM) 28 and/or random access memory (RAM) 30. Additional memory devices may also be made accessible to the processing device 20 by means of, for example, a hard disk drive interface 32, a magnetic disk drive interface 34, and/or an optical disk drive interface 36. As will be understood, these devices, which would be linked to the system bus 26, respectively allow for reading from and writing to a hard disk 38, reading from or writing to a removable magnetic disk 40, and for reading from or writing to a removable optical disk 42, such as a CD/DVD ROM or other optical media. The drive interfaces and their associated physically embodied, i.e., non-transitory, computer-readable media allow for the storage of instructions, data structures, program modules, and the like for execution by the processing unit 22 of the processing device 20. Those skilled in the art will further appreciate that other types of physically embodied computer-readable media that can store data and/or executable instructions may be used for this same purpose. Examples of such media devices include, but are not limited to, magnetic drives, flash memory cards or drives, random access memories, nano-drives, memory sticks, and other read/write and/or read-only memories. Meanwhile, the program modules that may be stored in one or more of the memory/media devices may include a basic input/output system (BIOS) 44 which contains the basic routines that help to transfer information between elements within the processing device 20, such as during start-up, an operating system 46, one or more applications programs 48 (such as a Web browser), other program modules 50, and/or program data 52.

To allow a customer to enter commands and information into the processing device 20, e.g., to create or upload task related instructions or to enter data about the user's yard, to search for and purchase product, upload images of the user's yard, etc., input devices such as a touch pad or keyboard 54 and/or a pointing device 56 are provided. While not illustrated, other input devices may include a microphone, a joystick, a game pad, a scanner, a camera, etc. These and other input devices would typically be connected to the processing unit 22 by means of an interface 58 which, in turn, would be coupled to the bus 26. Input devices may be connected to the processor 22 using interfaces such as, for example, a parallel port, game port, firewire, or a universal serial bus (USB). To view information from the processing device 20, a monitor 60 or other type of display device may also be connected to the bus 26 via an interface, such as a video adapter 62. In addition to the monitor 60, the processing device 20 may also include other peripheral output devices, not shown, such as speakers and printers.

As noted above, the processing device 20 may also utilize logical connections to one or more remote processing devices, such as a retailer system 68 having associated data repository 68A. As will be understood, the data repository 68A may maintain a database of product that is being sold by the retailer(s), customer related information (including information about features or location of the customer's yard, current products the customer owns, etc.), and the like. While the retailer system 68 has been illustrated in the exemplary form of a server computer, it will be appreciated that the retailer system 68 may, like processing device 20, be any type of device having processing capabilities. Similarly, it will be appreciated that the retailer system 68 need not be implemented as a single device but may be implemented in a manner such that the tasks performed by the retailer system 68 are distributed amongst a plurality of processing devices/databases located at the same or different geographical locations and linked through a communication network. Additionally, the retailer system 68 may have logical connections to other third party systems 80 via the network 12 and, via such connections, will be associated with functions that are supported by and data repositories that are linked to such other third party systems. Such third party systems may include, without limitation, systems of banking, credit, or other financial institutions, systems of third party providers of product, systems of shipping/delivery companies, systems that support social networking, etc.

For performing tasks as needed, the retailer system 68 may include many or all of the elements described above relative to the processing device 20. In addition, the retailer system 68 would generally include executable instructions that are likewise stored on physically

embodied memory devices for, among other things, supporting online retail channel services, supporting physical retail channel services, i.e., in store, maintaining records, etc. The retailer system 68 may thus include links to point-of-sale (POS) devices, e.g., kiosks, cash registers, etc. that are located within one or more retail stores without limitation. As will also be described in greater detail hereinafter, the retailer system 68 further has instructions for storing and using captured information related to the user's yard and outdoor power equipment needs (e.g., as captured by the recommendation tool or system using a processing device 20) to, among other things, provide customer specific recommendations. To this end, the system may incorporate a recommendation or selection engine which utilizes techniques to discern relationships between the data collected and data stored about products in the database 68A.

Communications between the processing devices 20/20′ and the retailer system 68 may be exchanged via a further processing device, such as a network router, that is responsible for network routing. Communications with the network router may be performed via a network interface component 73. Thus, within such a networked environment, e.g., the Internet, World Wide Web, LAN, or other like type of wired or wireless network, it will be appreciated that program modules depicted relative to the processing devices 20/20′, or portions thereof, may be stored in the memory storage device(s) associated with the retailer system 68 or may be stored on processing devices 20/20′ themselves.

It should be further understood that any operations that occur on the host retailer system 68 may alternatively, or in addition, be performed on the processing devices 20/20′.

As noted above, the retailer system 68 includes instructions for storing and using data points collected from a customer to, among other things, provide customer specific offerings and/or informational services. The collected data points may be reflective of a specific customer's online experiences with the retailer system 68 as well as the specific customer's in-store experiences with one or more retail establishment(s), i.e., the captured data points are reflective of variables associated with the user's particular lawn. Inputs may relate to limiting factors of the user's yard, such as the path, a gate width and/or curb size that must be traversed by the mower. There may be other various geo-based inputs (e.g., number of trees, tree locations, specific terrain data of the yard, yard size and shape, actual mowing area, water, sprinkler locations, etc.). Satellite imagery tied to your address may be a first input, followed by manual markups to indicate where known obstacles are located.

As discussed above, such data points captured for a specific customer would be associated with a customer ID, e.g., phone number, email address, a physical or digital

rewards card having an associated machine readable indicia, or the like.

For collecting data points from a specific customer while that customer is using the software associated with the retailer (e.g., in a kiosk within a retail establishment, on the user's smartphone or via an attachment to the user's outdoor power equipment), it is contemplated that a data collecting and analysis procedure may be utilized as generally illustrated in Figure 2B. By way of non-limiting example, the data collecting and analysis procedure may be initiated by the user initiating an interaction with a product recommendation tool or application via an interface process or method 250 illustrated in Figure 2B.

In Figure 2B, at block 252, the user logins into the system using a graphical user interface. At block 254, the system accesses the user profile data and poses various questions to the user relating to the parameters of the user's yard, the user's current outdoor power equipment device, and the like to gain information about the user's current mower situation. The questions posed may be the type of foliage being cut, the size and shape of the user's yard (e.g., square footage, terrain, actual mowing area, etc.), what obstacles that will have to be traversed or avoided by the mower (e.g., gate, sprinklers, trees, curbs, rocks, hazards to avoid during mowing, etc.), the sizes and shapes of the obstacles (e.g., what is the width of the gate opening, what is the curb size that must be traversed, etc.), and/or other questions aimed at defining the context in which the equipment will operate.

At block 256, data is received relating to the user's yard and/or needs of the user relative to the user's outdoor power equipment. As mentioned above, this can be achieved through the use of guided questions and other collected data. The data can be manually entered by the user or may be automatically retrieved from prestored memory or obtained directly from the mower or a user's profile. It should be noted that the system may receive satellite imagery tied to the user's address may be a first input, followed by manual markups of the imagery to indicate where known obstacles are located. Such imagery may then be used for the system to automatically determine the best path for cutting the user's grass, obstacles to avoid, yard size, and obtaining other data about the user's yard in that regard.

It should be noted that the data may be collected by data being collected by a computing device 272 (similar to element 20 mentioned above) which may be a kiosk at a retail establishment, as shown in block 272. In another embodiment, data is collected through or entered into the user's smartphone 278. For example, the user may manually answer the guided questions using the user's smartphone or enter parameters about the user's yard into the smartphone. Also, the user may send an image of the user's yard using the user's

smartphone, and it is noted that the user may annotate such image indicating the obstacles in the yard, the mowing area, or the like.

The data may also be collected using an attachment 282 that plugs or connects to the outdoor power equipment, such a mower 280. The attachment 282 collects various information and data about the mower as indicated in block 278 and as discussed in more depth relative to Figures 3A-3C. In Figure 3A, the mower 280 has a block 350 for receiving the attachment 282 which then may operate as plug-n-play. The attachment 282 may then be connected to bus 352 which may have one or more sensors 354 and may be connected to a computer on the mower. The computer then may access data from the sensors 354 and pre-stored information about the mower that could then be provided to the system through attachment 282. The attachment may also be able to communicate to terminal 272 or smartphone 276 to provide detailed information on the display screen via GUIs 302 and 304, as indicated by Figure 3B-3C. For example, the attachment 282 may be able to access not only current technical features of the mower, such as the type of mower, the horsepower capacity, cutting deck size, other features/components of the mower, etc., but could also could obtain operational data information including the average RPMs, average blade speed, average mower speed, and the like. Any of this information can be communicated to the system and/or to the smartphone 276 and terminal 272.

As shown in Figure 3A, the devices may communicate over network 251 (which is similar to network 12 of Figure 1) and may be separate and/or remotely from each other. For example, the smartphone 276 may be remote from the retail system 68. Moreover, the devices discussed herein may communicate with database 284 (similar to database 68A of Figure 1) over the network 251.

After the data is collected, the system then may determine which product category is the best fit for the user, such as a walk behind mower, a lawn tractor, a zero-turn tractor, and the like based on the inputted data, as shown in block 258. For example, if the user's yard is of a shape where the amount of sharp turns exceeds a threshold, the system may determine that a zero-turn mower is needed. Also, if the user has a yard size of less than a predefined threshold value, the system determines that the best fit for the user is a walk-behind mower, but if the yard size is above a second predefined threshold, the best fit for the user is a lawn tractor. It is noted that at least feature 258 may be optional.

In block 260, after the system determines the applicable product categories, the system may then filter which specific products in such categories are right for the user. It should be noted that the system may return products from categories other than the applicable

product categories and the present invention should not be limited to only presenting products from the determined applicable product categories.

The system matches parameters input into the system with parameters stored on database 284 and a score is then produced based on the number of matched. For example, if the user has a gate width of 4 feet, the system would query the system for all products that have a cutting deck less than 4 feet wide. Also, if the user has a terrain having an angle of 20 degrees, the system further queries all products that are rated for handling such angle or more. Moreover, if the user is determined to need a specific horsepower (based, for example, on a speed requirement the user prefers), the system selects all mowers having at least such horsepower. For each match to the criteria, a calculation score for each respective mower is increased and stored on the system until a final calculation score is determined. The products having the highest calculation score and/or those products that meet all of the user's criteria are selected as recommended products for the user.

In block 262, the system outputs the recommended products which meet the user's needs (or at least are the closest fit to the user's needs based on the determined calculation score). The output may then show the user how long it would take him to mow his yard with different products (e.g., 2 hours with walk behind, but only 30 minutes with a zero turn mower, etc.), how much horsepower the user really needs, etc. This may be done for all of the recommended products in a table format so that the user can compare the recommended products.

At block 264, through use of the recommendations provided to the customer, the customer can return to a store associated with the retailer to make a purchase and/or the customer may interact with the system and review all the recommended items to obtain more information therefrom, such as the costing information, warranty information, product descriptions, etc. The system may additionally provide links whereby the consumer can add product(s) to their shopping cart and complete their purchase online. As will be appreciated, data associated with a purchase of a product, whether online or in-store, and/or data points associated with the customer viewing product online may be captured and uploaded to the system server 68 for inclusion in the customer's profile.

Elements of embodiments of the present invention, such as methods 200 and 250 of FIGs. 2A-2B, may be embodied in hardware and/or software as a computer program code that may include firmware, resident software, microcode or the like. Additionally, elements of the invention take the form of a computer program product on a computer-usable or computer-readable storage medium having computer-usable or computer-readable program

code embodied in a medium for use by or in connection with a system. Examples of such a medium are illustrated in Figure 1 in computer system 20 as a memory 28, 30. A computer-usable or readable medium is any medium that contains, stores, communicates or transports the program for use by or in connection with a system. The medium, for example, is an electronic, magnetic, optical, electromagnetic, infrared or semiconductor system or the like.

As will be appreciated by one of skill in the art, the methods of the present invention, such as methods 200 and 250 of FIGs. 2A-2B, may be embodied as a method (including, for example, a computer-implemented process, and/or any other process), apparatus (including, for example, a system, machine, device, computer program product, and/or the like), or a combination of the foregoing. Accordingly, embodiments of the methods of the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment (including firmware, resident software, micro-code, *etc.*), or an embodiment combining software and hardware aspects that may generally be referred to herein as a "system." Furthermore, embodiments of the present invention may take the form of a computer program product on a computer-readable medium having computer-executable program code embodied in the medium.

Any suitable transitory or non-transitory computer readable medium may be utilized in methods 200 and 250 of FIGs. 2A-2B. The computer readable medium may be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, or device. More specific examples of the computer readable medium include, but are not limited to, the following: an electrical connection having one or more wires; a tangible storage medium such as a portable computer diskette, a hard disk, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), a compact disc read-only memory (CD-ROM), or other optical or magnetic storage device.

In the context of this document, a computer readable medium may be any medium that can contain, store, communicate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device. The computer usable program code may be transmitted using any appropriate medium, including but not limited to the Internet, wireline, optical fiber cable, radio frequency (RF) signals, or other mediums.

Computer-executable program code for carrying out operations of embodiments of the present invention may be written in an object oriented, scripted or unscripted programming language such as Java, Perl, Smalltalk, C++, or the like. However, the computer program code for carrying out operations of embodiments of the present invention may also be written

in conventional procedural programming languages, such as the "C" programming language or similar programming languages.

Embodiments of the present invention are described above with reference to flowchart illustrations and/or block diagrams of methods, apparatus (systems), and computer program products. It will be understood that each block of the flowchart illustrations and/or block diagrams, and/or combinations of blocks in the flowchart illustrations and/or block diagrams, can be implemented by computer-executable program code portions. These computer-executable program code portions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a particular machine, such that the code portions, which execute via the processor of the computer or other programmable data processing apparatus, create mechanisms for implementing the functions/acts specified in the flowchart and/or block diagram block or blocks.

These computer-executable program code portions may also be stored in a computer-readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the code portions stored in the computer readable memory produce an article of manufacture including instruction mechanisms which implement the function/act specified in the flowchart and/or block diagram block(s).

The computer-executable program code may also be loaded onto a computer or other programmable data processing apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a computer-implemented process such that the code portions which execute on the computer or other programmable apparatus provide steps for implementing the functions/acts specified in the flowchart and/or block diagram block(s). Alternatively, computer program implemented steps or acts may be combined with operator or human implemented steps or acts in order to carry out an embodiment of the invention.

As the phrase is used herein, a processor may be "configured to" perform a certain function in a variety of ways, including, for example, by having one or more general-purpose circuits perform the function by executing particular computer-executable program code embodied in computer-readable medium, and/or by having one or more application-specific circuits perform the function.

Embodiments of the present invention are described above with reference to flowcharts and/or block diagrams. It will be understood that steps of the processes described herein may be performed in orders different than those illustrated in the flowcharts. In other

words, the processes represented by the blocks of a flowchart may, in some embodiments, be in performed in an order other that the order illustrated, may be combined or divided, or may be performed simultaneously. It will also be understood that the blocks of the block diagrams illustrated, in some embodiments, merely conceptual delineations between systems and one or more of the systems illustrated by a block in the block diagrams may be combined or share hardware and/or software with another one or more of the systems illustrated by a block in the block diagrams. Likewise, a device, system, apparatus, and/or the like may be made up of one or more devices, systems, apparatuses, and/or the like. For example, where a processor is illustrated or described herein, the processor may be made up of a plurality of microprocessors or other processing devices which may or may not be coupled to one another. Likewise, where a memory is illustrated or described herein, the memory may be made up of a plurality of memory devices which may or may not be coupled to one another.

Many modifications and other embodiments of the inventions set forth herein will come to mind to one skilled in the art to which these inventions pertain having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the inventions are not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Moreover, although the foregoing descriptions and the associated drawings describe exemplary embodiments in the context of certain exemplary combinations of elements and/or functions, it should be appreciated that different combinations of elements and/or functions may be provided by alternative embodiments without departing from the scope of the appended claims. In this regard, for example, different combinations of elements and/or functions than those explicitly described above are also contemplated as may be set forth in some of the appended claims. In cases where advantages, benefits or solutions to problems are described herein, it should be appreciated that such advantages, benefits and/or solutions may be applicable to some example embodiments, but not necessarily all example embodiments. Thus, any advantages, benefits or solutions described herein should not be thought of as being critical, required or essential to all embodiments or to that which is claimed herein. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

THAT WHICH IS CLAIMED:

1. A method for providing a mower that is specifically recommended for a user based on received data associated with a yard of the user, the method comprising:

providing a computing device for a user;

receiving, using the computing device communicating with a computer over a network, particular parameters about the user's yard;

comparing the user's yard parameters with product category parameters stored on a database;

determining, using the data from the computing device, at least one product category based on the comparing of the user's yard parameters with product category parameters stored on a database;

comparing the user's yard parameters with product parameters within the at least one product category stored on a database;

determining that at least one product within the at least one product category is a match for the user based on the comparing the user's yard parameters with product parameters stored on a database; and

outputting a recommendation of the at least one product to the user.

2. The method of claim 1, wherein the receiving particular parameters comprise receiving data from an attachment that plugs into a current mower of the user and the attachments automatically transmitting the particular parameters.

3. The method of claim 1, wherein the receiving comprises receiving an image representing the user's yard, and the method further comprising analyzing the image to determine the particular parameters about the user's yard.

4. The method of claim 1, wherein the particular parameters of the user's yard comprises at least one of a number of trees in the user's yard, tree locations in the user's yard, specific terrain data of the yard, the user's yard size and shape, actual mowing area, water, or sprinkler locations.

5. The method of claim 1, further comprising:

providing guided queries to the user soliciting the particular parameters from the user; and

receiving input from the user through a smartphone of the user over the network to the computer.

6. The method of claim 1, further comprising:

providing guided queries to the user soliciting the particular parameters from the user; and

receiving input from the user through a kiosk of a retailer over the network to the computer.

7. An system for outdoor power equipment, the system comprising:

a computing device configured to receive and transmit, to a computer over a network, particular parameters about a user's yard;

a display screen to display an interface that solicits information from the user;

a processor in communication with a database associated with a retailer, the processor configured for:

comparing the user's yard parameters with product category parameters stored on a database;

determining, using the data from the computing device, at least one product category based on the comparing of the user's yard parameters with product category parameters stored on a database;

comparing the user's yard parameters with product parameters within the at least one product category stored on a database;

determining that at least one product within the at least one product category is a match for the user based on the comparing the user's yard parameters with product parameters stored on a database; and

outputting a recommendation of the at least one product to the user.

8. The system of claim 7, wherein the computing device comprises an attachment that connects to a current mower of the user to transmit data associated with the mower.

9. The system of claim 7, wherein the computing device comprises a kiosk located at the retailer and configured to be connected to the network.

10. The system of claim 7, wherein the particular parameters of the user's yard comprises at least one of a number of trees in the user's yard, tree locations in the user's yard, specific terrain data of the yard, the user's yard size and shape, actual mowing area, water, or sprinkler locations.

11. The system of claim 7, wherein the computing device is configured to receive an image representing the user's yard, and the processor is further configured to analyze the image to determine the particular parameters about the user's yard.

12. A method for providing a mower that is specifically recommended for a user based on received data associated with a yard of the user, the method comprising:

providing a computing device for a user;

receiving, using the computing device communicating with a computer over a network, particular parameters about the user's yard;

comparing the user's yard parameters with product parameters of mowers stored on a database associated with a retailer;

determining, using the particular parameters about the user's yard received from the computing device, at least one mower that is a match for the user based on the comparing the user's yard parameters with product parameters stored on a database; and

outputting a recommendation of the at least one mower to the user.

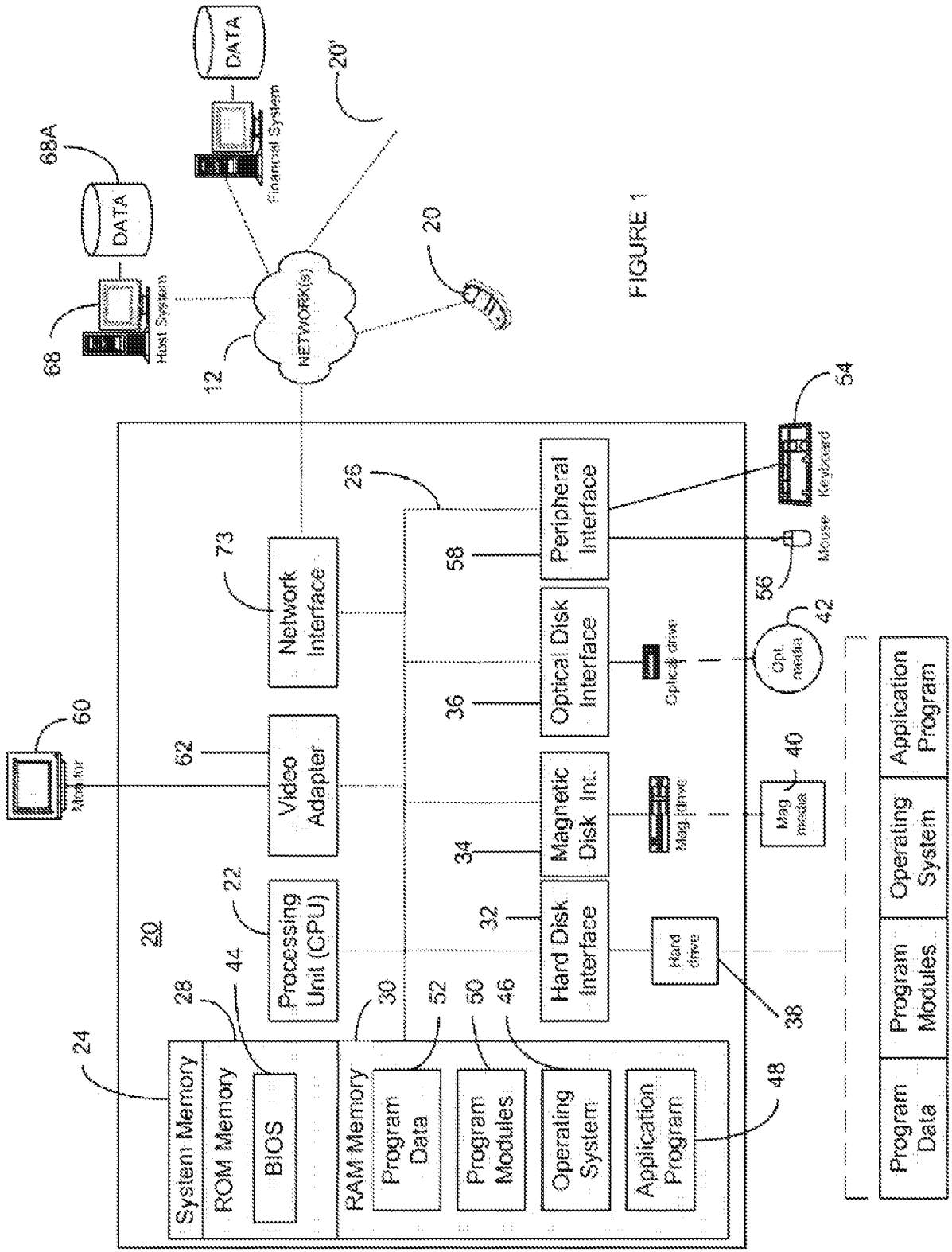

68A
DATA
68
Host System
DATA
Financial System
20'
12
NETWORK(s)
20
Monitor
60
62
Video Adapter
73
Network Interface
26
58
Peripheral Interface
Keyboard
54
Mouse
56
36
Optical Disk Interface
Optical drive
Opt. media
42
34
Magnetic Disk Int.
Mag drive
Mag media
40
22
Processing Unit (CPU)
32
Hard Disk Interface
Hard drive
38
20
28
44
30
52
50
46
24
System Memory
ROM Memory
BIOS
RAM Memory
Program Data
Program Modules
Operating System
Application Program
48
Program Data
Program Modules
Operating System
Application Program

FIGURE 1

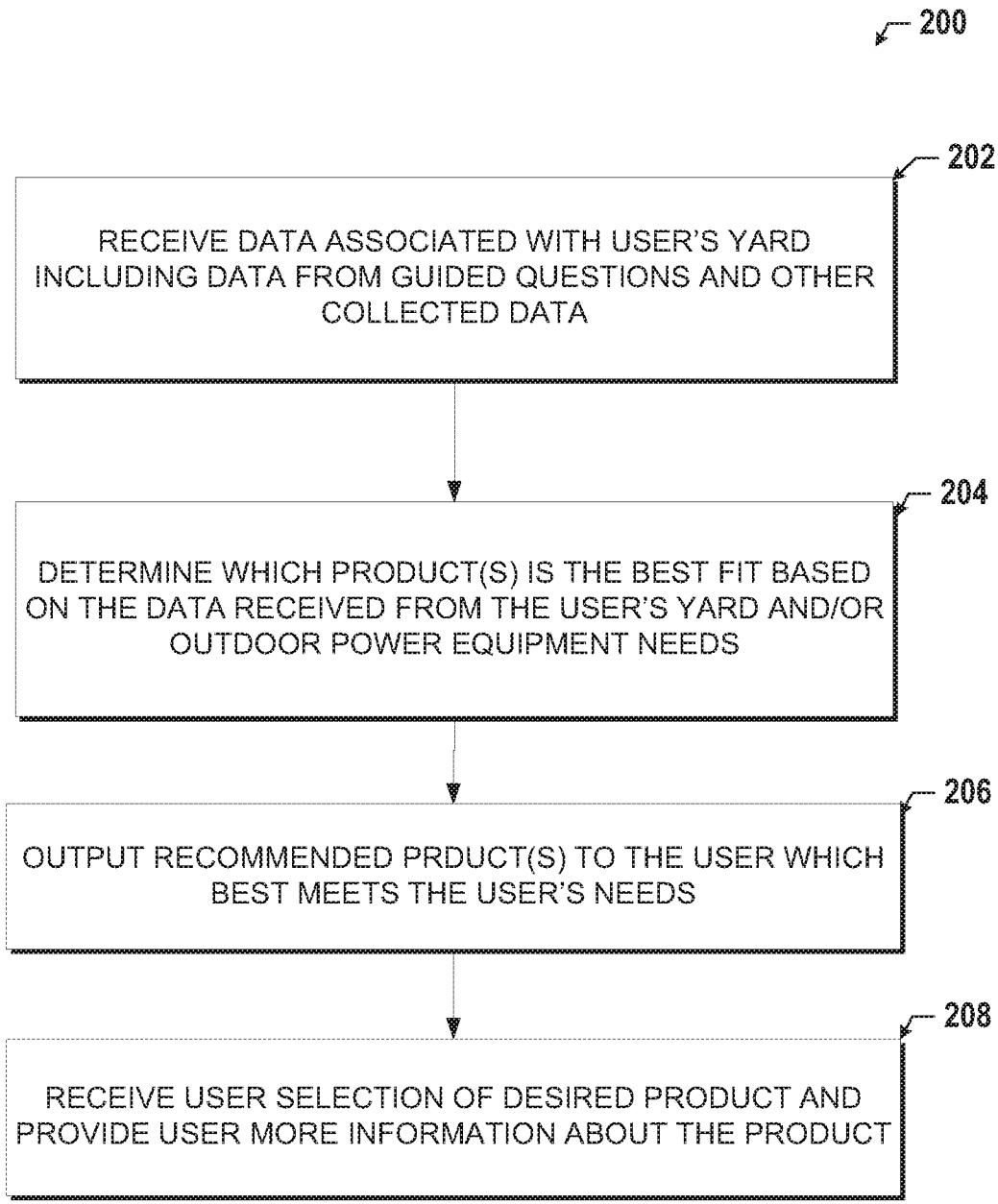

200
202
RECEIVE DATA ASSOCIATED WITH USER'S YARD INCLUDING DATA FROM GUIDED QUESTIONS AND OTHER COLLECTED DATA
204
DETERMINE WHICH PRODUCT(S) IS THE BEST FIT BASED ON THE DATA RECEIVED FROM THE USER'S YARD AND/OR OUTDOOR POWER EQUIPMENT NEEDS
206
OUTPUT RECOMMENDED PRDUCT(S) TO THE USER WHICH BEST MEETS THE USER'S NEEDS
208
RECEIVE USER SELECTION OF DESIRED PRODUCT AND PROVIDE USER MORE INFORMATION ABOUT THE PRODUCT

FIG. 2A

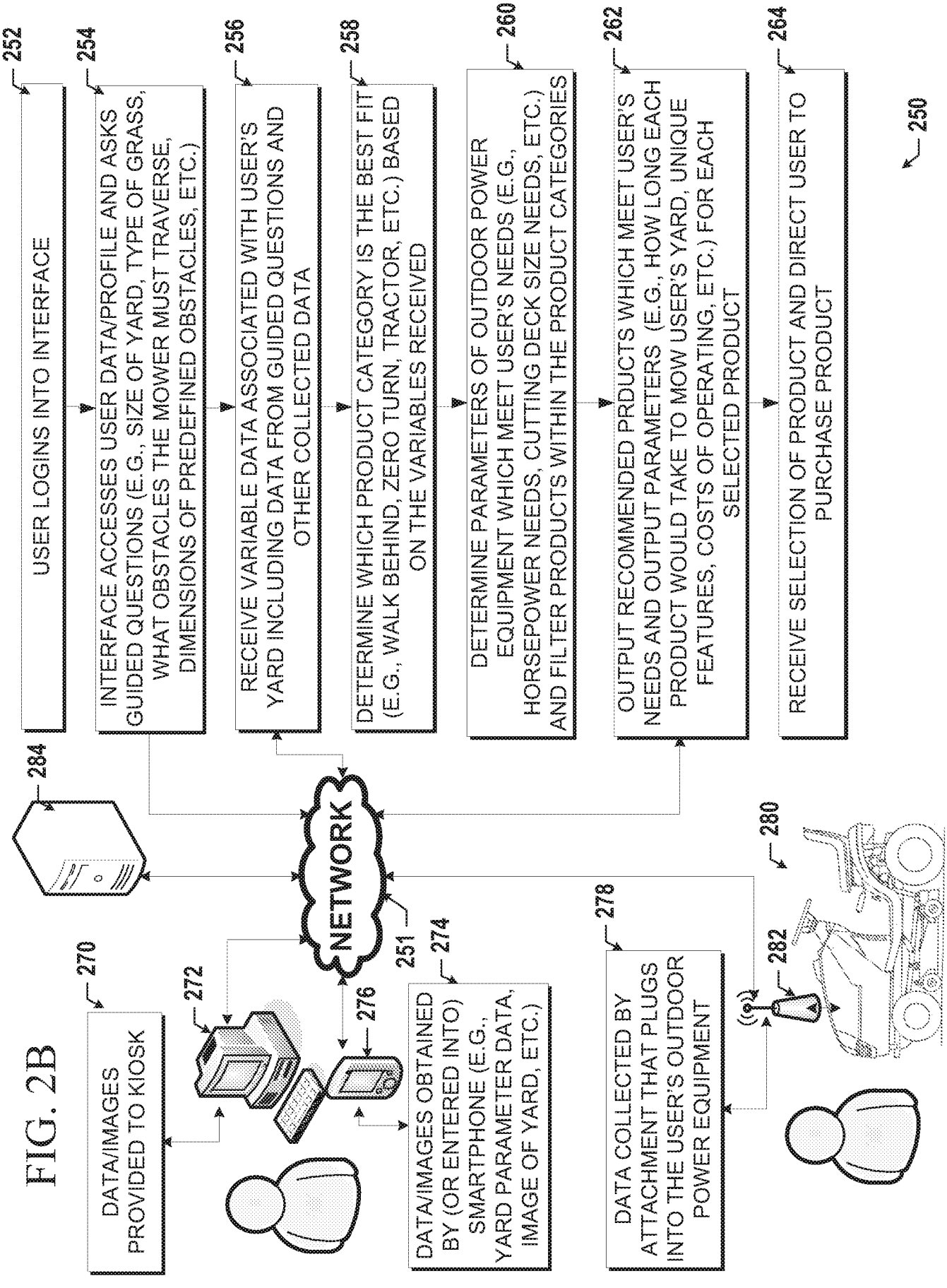

252
USER LOGINS INTO INTERFACE
254
INTERFACE ACCESSES USER DATA/PROFILE AND ASKS GUIDED QUESTIONS (E.G., SIZE OF YARD, TYPE OF GRASS, WHAT OBSTACLES THE MOWER MUST TRAVERSE, DIMENSIONS OF PREDEFINED OBSTACLES, ETC.)
256
RECEIVE VARIABLE DATA ASSOCIATED WITH USER'S YARD INCLUDING DATA FROM GUIDED QUESTIONS AND OTHER COLLECTED DATA
258
DETERMINE WHICH PRODUCT CATEGORY IS THE BEST FIT (E.G., WALK BEHIND, ZERO TURN, TRACTOR, ETC.) BASED ON THE VARIABLES RECEIVED
260
DETERMINE PARAMETERS OF OUTDOOR POWER EQUIPMENT WHICH MEET USER'S NEEDS (E.G., HORSEPOWER NEEDS, CUTTING DECK SIZE NEEDS, ETC.) AND FILTER PRODUCTS WITHIN THE PRODUCT CATEGORIES
262
OUTPUT RECOMMENDED PRODUCTS WHICH MEET USER'S NEEDS AND OUTPUT PARAMETERS (E.G., HOW LONG EACH PRODUCT WOULD TAKE TO MOW USER'S YARD, UNIQUE FEATURES, COSTS OF OPERATING, ETC.) FOR EACH SELECTED PRODUCT
264
RECEIVE SELECTION OF PRODUCT AND DIRECT USER TO PURCHASE PRODUCT
250
284
NETWORK
251
270
DATA/IMAGES PROVIDED TO KIOSK
272
276
274
DATA/IMAGES OBTAINED BY (OR ENTERED INTO) SMARTPHONE (E.G., YARD PARAMETER DATA, IMAGE OF YARD, ETC.)
278
DATA COLLECTED BY ATTACHMENT THAT PLUGS INTO THE USER'S OUTDOOR POWER EQUIPMENT
280
282

FIG. 2B

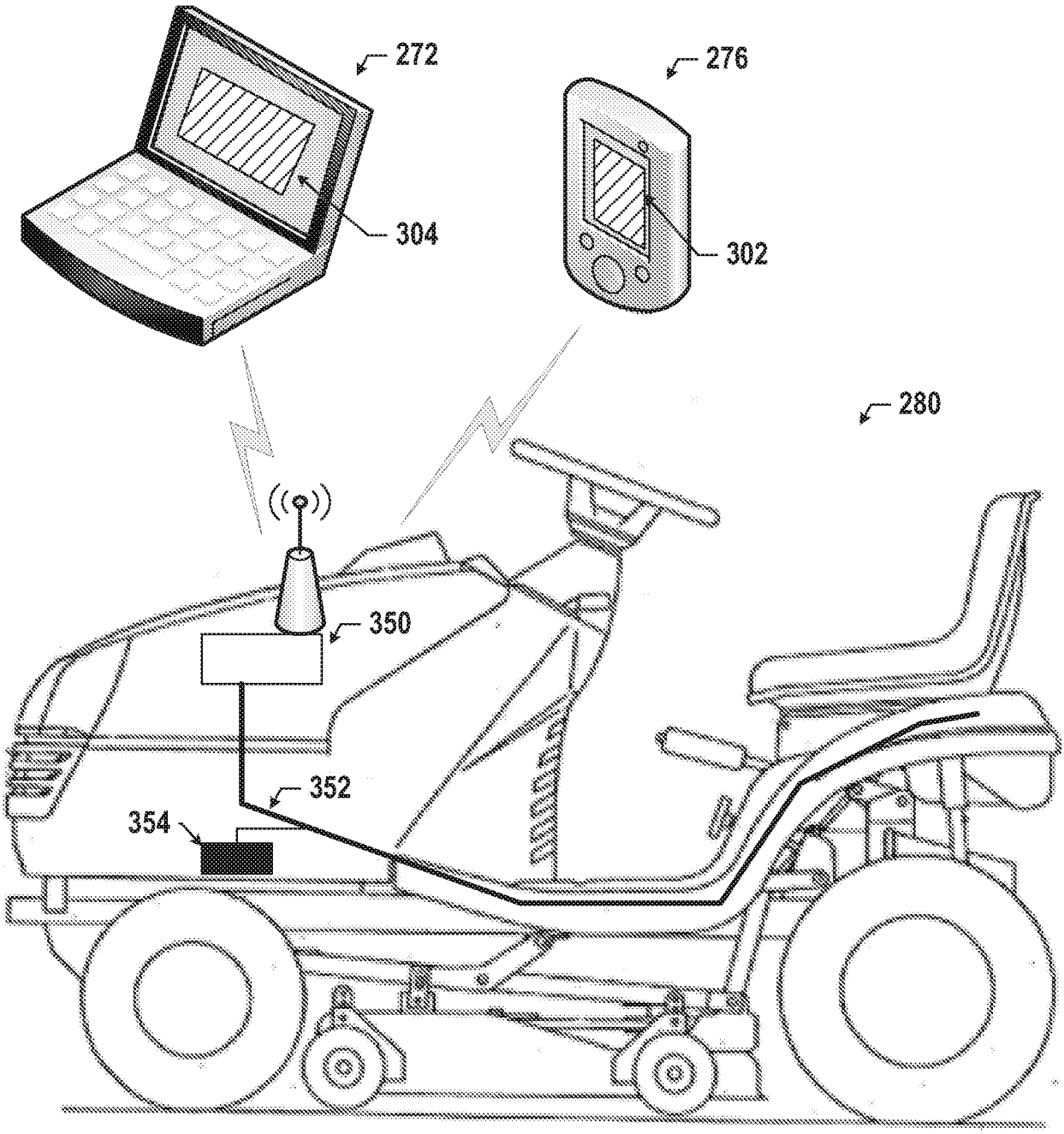


FIG. 3A

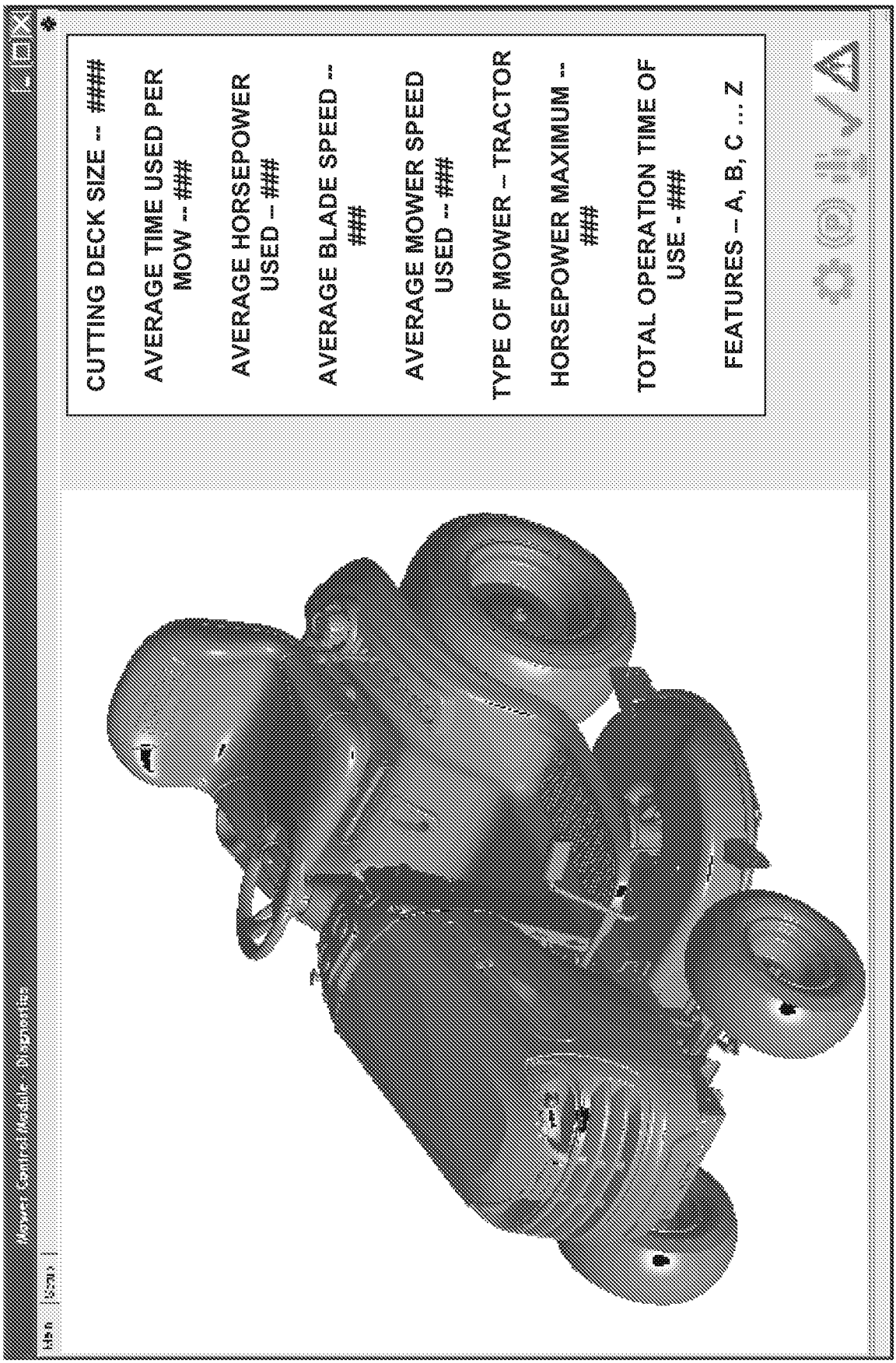

CUTTING DECK SIZE -- #####
AVERAGE TIME USED PER MOW -- ###
AVERAGE HORSEPOWER USED -- ###
AVERAGE BLADE SPEED -- ###
AVERAGE MOWER SPEED USED -- ###
TYPE OF MOWER – TRACTOR
HORSEPOWER MAXIMUM -- ###
TOTAL OPERATION TIME OF USE - ###
FEATURES – A, B, C ... Z
304

FIG. 3B

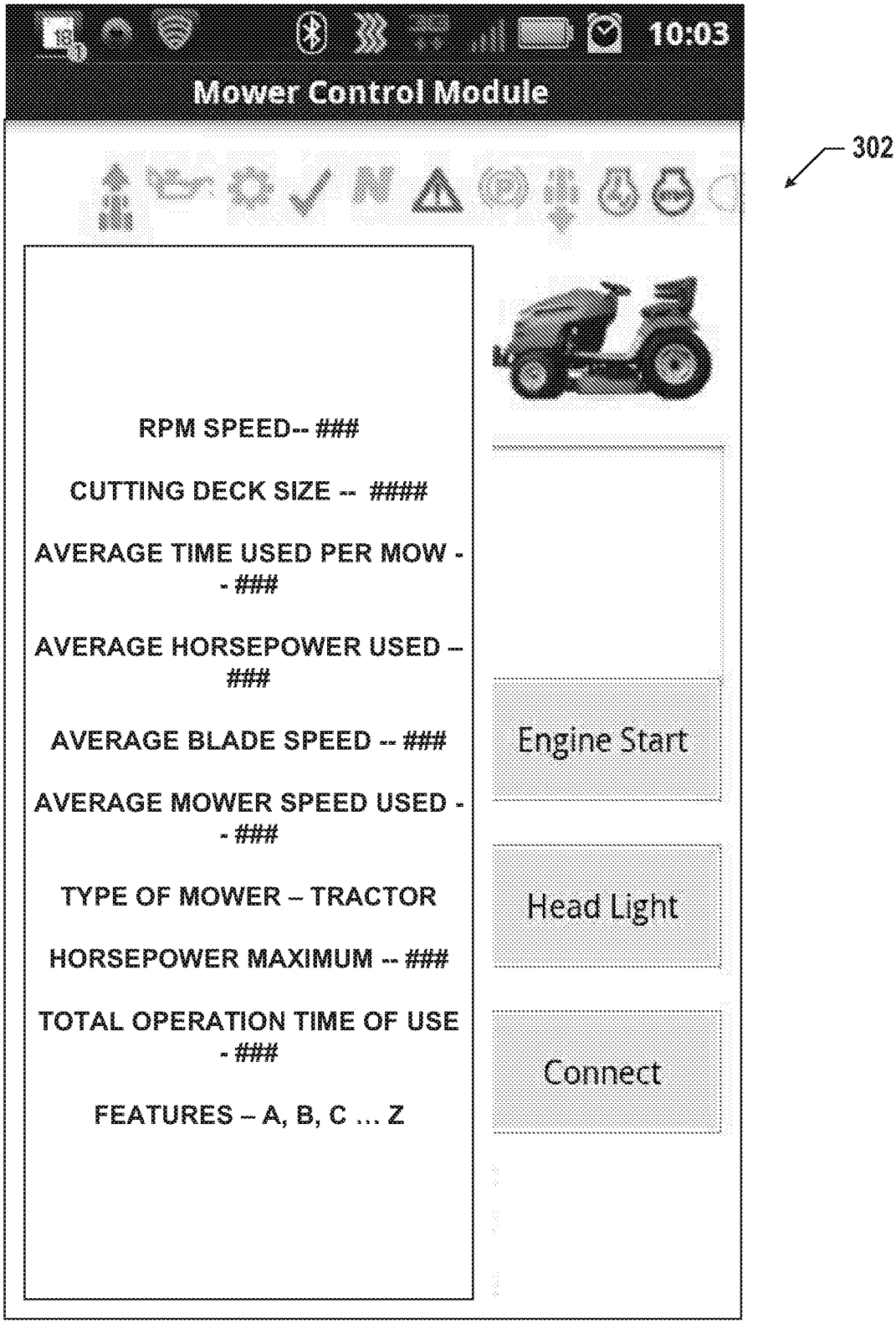

10:03
Mower Control Module
302
RPM SPEED-- ###
CUTTING DECK SIZE -- ####
AVERAGE TIME USED PER MOW - - ###
AVERAGE HORSEPOWER USED – ###
AVERAGE BLADE SPEED -- ###
AVERAGE MOWER SPEED USED - - ###
TYPE OF MOWER – TRACTOR
HORSEPOWER MAXIMUM -- ###
TOTAL OPERATION TIME OF USE - ###
FEATURES – A, B, C … Z
Engine Start
Head Light
Connect

FIG. 3C

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2015/058080

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06Q30/06
ADD.

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)
G06Q

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2013/030879 A1 (MUNJAL LEENA [US]) 31 January 2013 (2013-01-31) abstract; claims 1-18; figures 1-16 paragraphs [0011] - [0013], [0021] - [0036]	1-12
X	WO 2014/008627 A1 (TECHTRONIC OUTDOOR PROD TECH [CN]; RLCKEY TODD BRANDON [CN]; ZHOU HAIJ) 16 January 2014 (2014-01-16) abstract; claims 1-20; figures 1,2,5,6,8,9,12-14 paragraphs [0003] - [0005], [0130] - [0139]	1-12
X	US 2014/122228 A1 (WICAL KELLY JOSEPH [US]) 1 May 2014 (2014-05-01) the whole document	1-12

-/--

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
16 December 2015	23/12/2015

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Streit, Stefan

1

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2015/058080

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7 343 328 B1 (SMITH KIRSTEN [US] ET AL) 11 March 2008 (2008-03-11) page 11, line 24 - line 33; figure 5 -----	2,8
A	Anonymous: "Measuring distances and areas - Earth Help", , 7 November 2013 (2013-11-07), XP055236943, Retrieved from the Internet: URL:https://web.archive.org/web/20131107133725/https://support.google.com/earth/answer/148134?hl=en [retrieved on 2015-12-16] the whole document -----	3,11

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2015/058080

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		US 2014052517 A1	20-02-2014
WO 2014008627 A1	16-01-2014	AU 2012385408 A1	05-02-2015
		CA 2878492 A1	16-01-2014
		CN 104798048 A	22-07-2015
		EP 2870537 A1	13-05-2015
		US 2015316913 A1	05-11-2015
		WO 2014008627 A1	16-01-2014
US 2014122228 A1	01-05-2014	US 2014122228 A1	01-05-2014
		WO 2014070555 A1	08-05-2014
US 7343328 B1	11-03-2008	NONE	