TITLE OF THE INVENTION

CouponMaster Web-Enabled Coupon Delivery, Storage, and Redemption System

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] [Not Applicable]

- Claims are decent ~~but~~ but could be better
- Extensive flowcharts + high quality
  - need to be more readable though
- Might want to re-think order of drawings
  - IDS easier to talk about your Fig 1 after introducing your Fig 2.

A

BACKGROUND OF THE INVENTION

[0002] The present invention generally relates to a coupon system. More particularly, the present invention relates to a web-enabled coupon delivery, storage, and redemption system.

[0003] [general background]

[0004] [describe prior art]

[0005] [explain what is lacking in prior art/drawbacks]

[0006] [do not disclose our invention, but recite the shortcomings that it remedies]

[0007] Thus, a need has long existed for an XXXXX.

BRIEF SUMMARY OF THE INVENTION

[0008] One or more of the embodiments of the present invention provide [describe invention as claimed]

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Figure 1 illustrates a [invention] according to an embodiment of the present invention.

[0010] Figure 2 illustrates a flow chart of an embodiment of the [invention] process.

DETAILED DESCRIPTION OF THE INVENTION

[0011] Figures 1A, 1B, and 1C illustrate various views of a coupon storage device 100 according to a preferred embodiment of the present invention. As shown in Figures 1A, and 1B, the coupon storage device 100 includes a casing 110 with a proximal end 112 and a distal end 114, a trackwheel 120, a computer interface 130, a display screen 140, and a detachable printer module 150. The printer module 150 includes a printer output 155.

[0012] The trackwheel 120 is mounted specially to the casing 110 to allow rotation of the trackwheel 120 such that only a portion of the trackwheel 120 is visible outside of the casing 110. The computer interface 130 is mounted to and extends outward from the proximal end 112 of the casing 110. The display screen 140 is mounted to the casing 110 such that the display screen 140 is visible from a top-down perspective of the coupon storage device 100. The detachable printer module 150 is detachably mounted to the coupon storage device 100. The printer output 155 is mounted inside the detachable printer module 150.

[0013] In operation, the computer interface 130 plugs into the female computer interface port of a computer. The computer provides a coupon data unit, where a coupon data unit includes data representative of a discount offered on a purchase of a specific good. A coupon data unit may include a barcode and text associated with the discount offered and the specific good. The coupon data unit is loaded through the computer interface 130 into the coupon storage device 100. Once the coupon data unit is loaded, the coupon storage device detaches from the computer. The trackwheel 120 is then used to select the

coupon data unit and the display screen 140 displays the coupon data unit, where the display screen 140 is adapted to display a coupon data unit. The trackwheel 120 is then used to select either to display a barcode associated with the coupon data unit on the display screen 140, or to select to send the barcode for printing by the detachable printer module 150 through the printer output 155. When the trackwheel 120 selects to display the barcode associated with the coupon data unit on the display screen 140 and the barcode is displayed on the display screen 140, the barcode may be scanned by a barcode reader.

[0014] The trackwheel 120 may alternatively be a different type of navigational component, such as navigational buttons or a touchpad scrollbar used to cycle through options. The computer interface 130 may alternatively be a Universal Serial Bus connection, firewire or other hardwired connection, or a wireless connection. The display screen 140 may alternatively be a Liquid Crystal Display (LCD) screen, a cathode ray tube (CRT) display, plasma display, or any other type of display used in electrical devices, and the display screen 140 may alternatively display the coupon data unit while the coupon storage device 100 is still connected to a computer. The detachable printer module 150 may alternatively be non-detachable, and communication between the coupon storage device 100 and the printer may be permanently hardwired, as opposed to communication occurring between the printer module data connection 153 and the printer module data connection port 116. Alternatively, the detachable printer module 150 may not be attached to the coupon storage device 100, disallowing the print feature of the coupon storage device 100.

[0015] The detachable printer module 150 may be a standard component of the coupon storage device 100. The detachable printer module 150 may also be similar to the Brother PT-80 label printer, however without the keyboard input since the trackwheel 120 controls the operation of the coupon storage device 100. Also, the detachable printer module 150 prints on normal paper of sufficient size to fit a functional barcode, and not merely on labels as the PT-80 printer does.

[0016] Figure 1C shows an exploded view of a coupon storage device 100 according to an embodiment of the present invention, where the detachable printer module 150 is shown detached from the coupon storage device 100. As shown in Figure 1C, the detachable printer module 150 includes a printer module data connection 153. The coupon storage device 100 includes a casing 110 with a proximal end 112 and a distal end 114, a trackwheel 120, a computer interface 130, a display screen 140, and a printer module data connection port 116 at the distal end 114 of the casing 110.

[0017] The trackwheel 120 is mounted specially to the casing 110 to allow rotation of the trackwheel 120 such that only a portion of the trackwheel 120 is visible outside of the casing 110. The computer interface 130 is mounted to and extends outward from the proximal end 112 of the casing 110. The display screen 140 is mounted to the casing 110 such that the display screen 140 is visible from a top-down perspective of the coupon storage device 100. The detachable printer module 150 is connected to and in communication with the coupon storage device 100 through the printer module data connection 153. The printer module data connection 153 plugs into the printer module data connection port 116 at the distal end 114 of the casing 110. The printer output 155 is mounted inside the detachable printer module 150.

[0018] In operation, the computer interface 130 plugs into the female computer interface port of a computer. The computer provides a coupon data unit, which is loaded through the computer interface 130 into the coupon storage device 100. Once the coupon data unit is loaded, the trackwheel 120 is used to select the coupon data unit and the display screen 140 displays the coupon data unit. The trackwheel 120 is then used to select either to display a barcode associated with the coupon data unit on the display screen 140, or to send the barcode through the printer module data connection port 116 into the detachable printer module 150 through the printer module data connection 153 for printing by the detachable printer module 150 through the printer output 155.

[0019] The trackwheel 120 may alternatively be a different type of navigational component, such as navigational button, a touchpad scrollbar used to cycle through options, or a touch screen interface. The computer interface 130 may alternatively be a Universal Serial Bus connection, firewire or other hardwired connection, or a wireless connection. The display screen 140 may alternatively be an LCD screen, cathode ray tube (CRT) display, plasma display, or any other type of display used in electrical devices. The detachable printer module 150 may alternatively be non-detachable, and communication between the coupon storage device 100 and the printer may be permanently hardwired. The detachable printer module 150 may also be held in place when connected to the coupon storage device 100 by clasps or any "snap into place" connector or magnets or any similar connection devices. Alternatively, the detachable printer module 150 may not be attached to the coupon storage device 100.

[0020] Figure 2 illustrates a block diagram of the coupon storage device 200 according to a preferred embodiment of the present invention. The coupon storage device 200

includes a processing unit 210, a trackwheel 220, a computer interface 230, a display screen 240, a detachable printer module 250, a battery 260, and a memory 270.

[0021] In the coupon storage device 200, the computer interface 230 is in bidirectional communication with the processing unit 210, and is electrically connected to the battery 260. The trackwheel 220 provides input data to the processing unit 210. The processing unit 210 is electrically connected to and is in communication with the battery 260. The processing unit 210 is further in bidirectional communication with the memory 270 and detachable printer module 250, and is in communication with the display screen 240. The battery 260 is electrically connected to the detachable printer module 250.

[0022] In operation, when the coupon storage device 200 is connected to a computer, AC power flows through the computer interface 230 into the battery 250. From the battery 250, power flows to the processing unit 210, and from the processing unit 210 to the display screen 240 and the memory 270. Power also flows from the battery 250 into the detachable printer module 250. When the coupon storage device 200 is detached from a computer, the battery 250 supplies the power to the coupon storage device 200.

[0023] In operation, a coupon data unit enters the coupon storage device 200 through the computer interface 230 into the processing unit 210. The processing unit then stores the coupon data unit in the memory 270. When the trackwheel 220 is used to select a coupon data unit for display, the processing unit 210 retrieves the associated coupon data unit from the memory 270, and displays the data on the display screen 240. When the trackwheel 220 is used to request that the barcode associated with the retrieved coupon data unit be displayed on the display screen 240, the processing unit 210 retrieves the barcode from the memory 270, and displays the barcode on the display screen 240.

When the trackwheel 220 is used to request that the barcode associated with the retrieved coupon data unit be printed, the processing unit 210 retrieved the barcode from the memory 270, and sends it to the detachable printer module 250 where the barcode is printed. The processing unit 210 also monitors the charge remaining in the battery 260, and displays a battery charge status indicator on the display screen 240.

[0024] The trackwheel 220 may alternatively be a different type of navigational component, such as navigational buttons or a touchpad scrollbar used to cycle through options. The computer interface 230 may alternatively be a Universal Serial Bus connection, firewire or other hardwired connection, or a wireless connection. The display screen 240 may alternatively be an LCD screen, cathode ray tube (CRT) display, plasma display, or any other type of display used in electrical devices. The detachable printer module 250 may alternatively be non-detachable, and communication between the coupon storage device 200 and the printer may be permanently hardwired, as opposed to communication occurring between the printer module data connection 153 and the printer module data connection port 116. Alternatively, the detachable printer module 250 may not be attached to the coupon storage device 200. The memory 270 may alternatively be a hard drive or other data storage device, or may be located on the processing unit 210. The battery 260 may alternatively be a fuel cell, a solar power cell, a capacitor, or any other power retaining device. The battery 260 may also be a rechargeable battery, which is recharged when the coupon storage device 100 is plugged into a computer.

[0025] Figures 3, 4 and 5 illustrate the displays of the display screen 140 during operation of the coupon storage device 100 according to a preferred embodiment of the present invention. The coupon data unit selection screen 300 includes manufacturers 310

in a list of manufacturers 315, a manufacturer selection cursor 320, and a manufacturer list position indicator 330. The coupon data unit display screen 400 includes a manufacturer name 410, a coupon description 420, an associated product 430, a display option 440, a print option 450, an exit option 460, an option selection indicator 470, and an option list 480. The barcode display screen 500 includes a barcode 510.

[0026] The list of manufacturers 315 is created from loaded coupon data units from manufacturers 310, and the manufacturer selection cursor 320 is responsive to input from the user through the trackwheel 120. The manufacturer list position indicator is responsive to the position of the manufacturer selection cursor 320 in the list of manufacturers 315. The manufacturer name 410, coupon description 420, and associated product 430 are all dependent on which manufacturer 310 in the list of manufacturers 315 is selected by the user with the trackwheel 120. The option selection indicator 470 is responsive to input from the user through the trackwheel 120, and moves through the option list 480. The barcode 510 on the barcode display screen 500 is responsive to input from the user selecting the display option 440 with the trackwheel 120, and is associated with the manufacturer 310 in the list of manufacturers 315 that was selected by the user with the trackwheel 120. Input from the user selecting the print option 450 with the trackwheel 120 results in the printing of the barcode 510 associated with the current coupon data unit. Input from the user selecting the exit option 460 with the trackwheel 120 leads back to the coupon data unit selection screen 300.

[0027] In operation, user input through the trackwheel 120 moves the manufacturer selection cursor 320 through the list of manufacturers 315. As the manufacturer selection cursor 320 moves up or down through the list of manufacturers 315, the manufacturer list

position indicator 330 moves up or down accordingly. Once the desired manufacturer 310 in the list of manufacturers 315 is highlighted by the manufacturer selection cursor 320, the user may select that manufacturer 310 for further viewing by depressing the trackwheel 120.

[0028] Once the appropriate manufacturer 310 has been chosen, the coupon data unit display screen 400 shows the selected manufacturer name 410, a coupon description 420, and an associated product 430 associated with the chosen manufacturer 310. No matter which manufacturer 310 the user selected, the display screen 140 on the coupon storage unit 100 displays the options list 480 including "Display" 440, "Print" 450, and "Exit" 460. User input through the trackwheel 120 moves the option selection indicator 470 through the option list 480, and once the appropriate option is highlighted by the option selection indicator 470, the user may select that option by depressing the trackwheel 120.

[0029] Selecting "Display" 440 results in the barcode display screen 500 displaying the barcode 510 associated with coupon data unit selected. Selecting "Print" 450 results in the printing of the barcode 510 associated with the coupon data unit selected. Selecting "Exit" 460 results in the display of the coupon data unit selection screen 300.

[0030] Alternatively, the list of manufacturers 315 may be replaced by a list of products, or a list of some other piece of data associated with coupon data units. Also, there may be alternate ways of selecting a manufacturer 310 from the list of manufacturers 315, such as there being no manufacturer selection cursor 320, with the manufacturer at a certain position on the screen being the default manufacturer highlighted, or the list of manufacturers 315 may itself move based on user input with the manufacturer 310 at a certain point on the screen being the default highlighted manufacturer. Alternatively,

there may be no manufacturer list position indicator 330, and each manufacturer may be assigned a number, one through the number of coupon data units stored in the coupon storage device 100, and that number may be displayed next to the manufacturer's name in the list of manufacturers 310.

[0031] The coupon data unit display screen 400 may alternatively show information other than the selected manufacturer name 410, a coupon description 420, and an associated product 430. Also, there may be alternate ways of selecting an option from the option list 480 on the coupon data unit display screen 400, such as there being no option selection indicator 470, with the option at a certain position on the screen being the default option highlighted, or the option list 480 may itself move based on user input with the option at a certain point on the screen being the default highlighted option. The print option 450 may alternatively not be shown when there is no detachable printer module 150 attached to the coupon storage device 100. The barcode 510 shown on the barcode display screen 500 may alternatively be any product identifier used in a retail store.

[0032] Figure 6 illustrates a flow chart of a method of use 600 of the coupon storage device 100 according to a preferred embodiment of the present invention. The first step in the operation of the coupon storage device 100 occurs on startup, or upon depression of the trackwheel 120 to reactivate the coupon storage device 100 from a sleep mode in which it conserves power when it has been idle for 30 seconds. The coupon storage device 100 begins by displaying available coupon data unit manufacturers 610. A user then inputs information by turning the trackwheel to highlight the desired coupon data unit 620, and depressing the trackwheel to select the highlighted coupon data unit 625.

The coupon storage device 100 responds with the coupon data unit by displaying the manufacturer, product, and discount of the coupon data unit 630, and displaying "Display," "Print," and "Exit" options 635.

[0033] When the user provides input by selecting "Display" 641 with the trackwheel 120, the coupon storage device 100 responds by displaying the coupon barcode 643. The coupon may then be redeemed by scanning the barcode with a barcode reader 645. The user may then reset the coupon storage device 100 to the original screen displaying available coupon data unit manufacturers 610 by performing the step of depressing the trackwheel 647. When the user provides input by selecting "Print" 651 with the trackwheel 120, the coupon storage device 100 responds by printing the barcode 643. The coupon storage device 100 then resets to the original screen displaying available coupon data unit manufacturers 610. When the user provides input by selecting "Exit" 661, the coupon storage device 100 resets to the original screen displaying available coupon data unit manufacturers 610.

[0034] Alternatively, the step of displaying available coupon data unit manufacturers 610 may be replaced displaying a list of products, or a list of some other piece of data associated with coupon data units. Also, the step of using the trackwheel to select a coupon data unit 620 may be replaced with using an alternate navigational component to select the coupon data unit, such as navigational buttons, a touchpad scroll bar, or a touchscreen interface. Additionally, choosing a coupon data unit by its manufacturer may be replaced with cycling through the full information of all stored coupon data units. The step of displaying the manufacturer of the coupon data unit and product and discount 630 may be replaced with alternatively displaying information about the coupon data unit

other than the selected manufacturer name, a coupon description, and an associated product. Also, there may be alternate options other than the steps of selecting "Display" 641, selecting "Print" 651, or selecting "Exit" 661, such as not being able to select "Print" or "Exit," and instead always displaying the coupon barcode 643. Alternatively, the period of time after which the coupon storage device 100 enters its sleep mode may be shorter than thirty seconds, or longer than thirty seconds up to one hour.

[0035] Figure 7 illustrates a block diagram of the online coupon system 700 according to an embodiment of the present invention. The online coupon system 700 includes a coupon storage device 710, a user computer 715, a registered user service 720, a coupon data unit monitoring area 725, a downloads storage memory 730, a web server/application platform 735, a search engine 740, a coupon data unit storage memory 745, an advertising storage memory 750, a seller entity service 755, and an auction server 760.

[0036] The coupon storage device 710 is in bidirectional communication with the user computer 715. The user computer is in one of bidirectional communication with the web server/application platform 735 and bidirectional communication with the registered user service 720, where the registered user service is in bidirectional communication with the web server/application platform 735. The web server/application platform 735 sends and retrieves demographic information to the coupon data unit monitoring area 725. The downloads storage memory 730 sends software update information to the web server/application platform 735. The web server/application platform is in bidirectional communication with the search engine 740, where the search engine 740 is in bidirectional communication with the coupon data unit storage memory 745. The search

engine 740 adapts inputted search terms to be used to search a database of a plurality of coupon data units, where the search terms are adapted by causing them to be identified with a coupon data unit so that the search engine 740 returns the coupon data unit when the search term is used to search the database. The coupon data unit storage memory 745 may send information directly to the web server/application platform 735. The auction server 760 may send information to the coupon data unit storage memory 745. The seller entity service 755 may send information to one of the auction server 760, the coupon data unit storage memory 745, and the advertising storage 750. The seller entity service is in bidirectional communication with the web server/application platform 735. The advertising storage 750 may send information to the web server/application platform 735.

[0037] In operation, a seller entity may use the website through the seller entity service 755 upon accessing the uniform resource identifier of the website. There, the seller entity may purchase advertising space and store advertising in the advertising storage 750. The uploaded advertising is sent from the advertising storage 750 to the web server/application platform 735 as needed to be displayed on the user's computer 715. In the seller entity service 755, the seller entity may alternatively elect to store a coupon data unit in the coupon data unit storage memory 745. Once the coupon data unit is stored in the coupon data unit storage memory 745, the coupon data unit is sent to the web server/application platform 735 as needed to be displayed on the user's computer 715. Once the seller entity has stored a coupon data unit in the coupon data unit storage memory 745, the seller entity may choose to bid on a search term to be associated with that coupon data unit, where the bidding takes place in the auction server 760. The information regarding the winner of the auction and what search term is to be associated

with which coupon data unit is sent from the auction server 760 to the coupon data unit storage memory 745. The seller entity may also access the coupon data unit monitoring area 725 through the web server/application platform 735 to view demographic information of users that have downloaded coupon data units of the seller entity.

[0038] In operation, a user computer 715 accesses coupon data units directly through the web server/application platform 735. The user computer 715 may also log into the registered user service 720 for increased functionality. The user computer 715 may then access the web server/application platform 735 through the registered user service 720. When the user computer 715 is logged into the registered user service 720, demographic information about the user such as age, gender, location, product preferences, buying habits, etc. are sent from the registered user service 720 to the coupon data unit monitoring area 725 through the web server/application platform 735, along with any searches and downloads that user may have made for data aggregation purposes. When the user computer 715 is not logged into the registered user service 720, the user includes a zip code along with any search. The zip code, search, and any download are then sent from the web server/application platform 735 to the coupon data unit monitoring area 725 for data aggregation purposes.

[0039] To perform a search, the user computer 715 uses the web server/application platform 735 after accessing the website through a uniform resource identifier, either through the registered user service 720 or not. The user computer 715 then enters a search term into the search engine 740 through the web server/application platform 735. The search engine 740 accesses a database of coupon data units in the coupon data unit storage memory 745 and searches the coupon data units it contains, where the coupon

data unit storage memory (2) a remote server adapted to storing a plurality of coupon data units. The database of coupon data units is adapted to allowing a search term to be used to search the database, where the search term is adapted to be identified with an associated coupon data unit so that the associated coupon data unit is returned when the search term is used to search the database. The search engine 740 then returns the results of the search to the web server/application platform 735 in the form of a list of coupon data units for the user computer 715 to display. The user then selects a coupon data unit from the list displayed on the user computer 715. The user computer 715 transmits the selection, either throughthe registered user service 720, to the web server/application platform 735 or directly to the web server/application platform 735, which relays the information to the coupon data unit storage memory 745 through the search engine 740. The coupon data unit storage memory 745 returns the coupon data unit to the web server/application platform 735 for displaying by the user computer 715. When the user wants to keep the coupon data unit, the user computer 715 downloads the coupon data unit from the web server/application platform 735 into the user computer 715, and then loads the coupon data unit into the coupon storage device.

[0040] To manage coupon data units in the coupon storage device 710, the user may connect the coupon storage device 710 to the user computer 715, and access the registered user service 720 through the user computer 715. The coupon storage device 710 transmits data regarding its contents through the user computer 715 to the registered user service 720. The registered user service 720 then allows sorting and deletion of coupon data units in the coupon storage device 710 through the user computer 715. Once

the desired coupon data units are loaded into the coupon storage device 710, the coupon storage device 710 detaches from the user computer 715.

[0041] When software in the coupon storage device 710 needs to be updated, the downloads storage memory 730 stores the updates. When a coupon storage device 710 is connected to a user computer 715, and the user computer accesses the web server/application platform 735, the downloads storage memory 730 sends the update to the coupon storage device 710 through the web server/application platform 735 and through the user computer 715.

[0042] Alternatively, the advertising space and advertising stored in the advertising storage 750 and transmitted to the user computer 715 through the web server/application platform 735 may be auctioned in a similar fashion to search terms, or the search terms may be simply sold in a fashion similar to the advertising space. Also, alternative information regarding demographics may be recorded and tracked. A user may alternatively browse the full list of available coupon data units, or coupon data units in a specific category as opposed to searching for specific terms. And a user may alternative do more than sorting and deleting of coupon data units in the coupon storage device 710.

[0043] Figure 8 illustrates a flow chart of a method of use of a coupon website by a seller entity 800 according to a preferred embodiment of the present invention. In operation, the seller entity begins by accessing the seller entity service 810, when the first step of checking if this visit is the first visit of the seller entity 812 occurs. Checking if this visit is the first visit of the seller entity 812 is accomplished through the steps of allowing the seller entity to log in 816 when this visit is not the first visit of the seller entity, and going through the verification process 814 when this visit is the first visit of the seller entity.

Once the seller entity has been one of verified and logged in, and logged in, the user may select one of the steps of choosing to upload a coupon data unit 820, choosing to monitor coupon data units 830, choosing to make a monetary offer on a search term 840, and choosing to purchase advertising space 850.

[0044] When the seller entity performs the step of choosing to upload a coupon data unit 820, the step of entering the coupon value, associated product, brand, expiration date, restrictions, and barcode as text/numeric 822 follows. This step includes entering each piece of information in less than sixteen characters to be downloaded to a coupon storage device 100, and entering each piece of information without a character limit to be displayed online. Once the step of entering the coupon value, associated product, brand, expiration date, restrictions, and barcode as text/numeric 822 is complete, the seller entity may begin the step of uploading a picture of the coupon or related text when desired 824. Following completion of the step of uploading a picture of the coupon or related text when desired 824, the seller entity may begin the step of making the coupon data unit a featured coupon data unit when desired 826. The final step in uploading a coupon data unit is beginning payment of the fee for the upload 828. This fee begins as a base fee for the upload, but increases the more the coupon data unit is downloaded.

[0045] Choosing to monitor coupon data units 830 results in the step of viewing available demographics of coupon data unit downloaders 832, after which the step of receiving consulting help when desired 834 occurs. The information associated with monitoring coupon data units includes the number of times a coupon data unit was downloaded and non-personally identifiable statistical information associated with the coupon data unit. For example, the seller entity may see who downloaded the coupon data unit based on zip

code and internet service provider location when the downloader was not a registered user. When the downloader was a registered user, the seller entity may see the demographic information entered by the registered user upon registration, as well as that user's activity on the website. The consulting help may include assistance in targeting the desired audience of the seller entity, harmonizing the print and online coupon of the seller entity, and may even include complete coupon management offerings of the seller entity.

[0046] Choosing to auction a search term 840 leads to nominating a search term and a coupon data unit 842. This allows the steps of making a monetary offer on the search term 844, and then the step of paying the final monetary offer upon winning the auction 846.

[0047] Choosing to purchase advertising space 850 results in the step of selecting a desired advertisement location 852. Once this step is completed, the steps of making a monetary offer on the advertising spot 854, and then paying the final monetary offer upon winning the auction 856 may occur. Once the step of paying the final monetary offer upon winning the auction 856 is performed, the seller entity may perform the step uploading the desired advertisement 858.

[0048] The steps of making the coupon data unit a featured coupon data unit when desired 826, receiving consulting help when desired 834, paying the final monetary offer upon winning the auction 846, and uploading the desired advertisement 858 all return back to the step of allowing the user to select one of choosing to upload a coupon data unit 820, choosing to monitor coupon data units 830, choosing to make a monetary offer on a search term 840, and choosing to purchase advertising space 850.

[0049] In the alternative, the seller entity service may be secure. Also, less information may be provided in the step of entering the coupon value, associated product, brand, expiration date, restrictions, and barcode as text/numeric 822, or other information may be required. Any or all of the steps of uploading a picture of the coupon when desired 824, making the coupon data unit a featured coupon data unit when desired 826, and receiving consulting help when desired 834 may all be required or at extra cost. Also, the coupon barcode may be submitted as a graphic.

[0050] Alternatively, there may be levels of subscription that allow seller entities different levels of viewing available demographics of coupon data unit downloaders 832. Also, there may be no bidding on the search term 844 and bidding on the advertising spot 854, where the search terms and advertising spots are instead simply purchased without an auction. Payment of the fee for the upload may alternatively be solely a one time payment, or may be fully based on performance of the coupon data unit. Also, the number of characters available for the descriptive information of the coupon data unit may alternatively not be limited.

[0051] Figure 9 illustrates a flow chart of a method of use of the coupon website by a coupon user 900 according to a preferred embodiment of the present invention. In operation, the user first completes the step of accessing the server through a computer 905. Once the user has accessed the server, the next step of checking whether the user is a registered user 910 occurs. When the user is not a registered user, the step of checking whether the user would like to become a registered user 915 is performed. When the user does not want to register, the user performs the step of entering the zip code of the user 920 for data aggregation purposes in conjunction with future coupon data unit searches

and downloads. When the user does wish to register, they perform the step of registering 925, which includes entering information such as name, age, gender, location, product preferences, and buying habits. Once the user has completed the registering 925 step, or when the user was previously registered, the user may complete the step of signing in 930. Once the registered user has signed in, the actions of the user on the site are recorded and associated with the user's demographic information for viewing by seller entities.

[0052] Once the user has completed the step of signing in 930 or of entering the zip code of the user 920, the next step is clicking on a "Search Coupons" button 935. The user may then complete the step of inputting a search term 940. The next step is checking whether the search term has been auctioned 945. When the search term has not been auctioned, the search proceeds and the step of displaying the search results 955 occurs. When the search term has been auctioned, the search proceeds as usual, but the next step is displaying the search results with the search term auction winner at the top of the list 950. The user may browse through the list of returned search results, and perform the step of selecting a coupon data unit 960. The user may then execute the step of viewing the selected coupon data unit 962, followed by downloading the selected coupon data unit 964 to the computer, followed by transferring the coupon data unit from the computer to the coupon storage device 966.

[0053] Once the user has completed the step of signing in 930, the user may perform the step of clicking on "My Account" 970 to enter the user's private account area. Once in the user's account area, the user may perform one of the steps of tracking previously downloaded and viewed coupon data units 980, performing diagnostics 975 on the

coupon storage device 100, keeping and viewing a watch list 985 of coupon data units to download, and viewing and sorting downloaded coupon data units 990 on the coupon storage device 100 of the user. When the user chooses to view and sort downloaded coupon data units, the user may also perform the step of deleting coupon data units 995 from their coupon storage device 100. The step of performing diagnostics 975 includes downloading software updates to the coupon storage device 100.

[0054] Alternatively, there may be multiple levels of registration, with higher levels having increased functionality. When the user chooses not to log in or become a registered user, the zip code may alternatively be requested by the site before each coupon data unit search, or before any single coupon data unit search. Additionally, once the user enters a zip code, the user's IP address may also be logged and associated with the zip code, and cookies may be used to track the activity of the user.

[0055] Figure 10 illustrates a flow chart of a method of purchasing the association of a search term with a coupon data unit through an auction 1000 according to a preferred embodiment of the present invention. In operation, the first seller entity begins by accessing the seller entity site 1010, where the first seller entity enters the site by logging in 1020. When the seller entity has established a first coupon data unit, the first seller entity performs the step of nominating a search term 1030, where the search term is adapted to be used to search a database of a plurality of coupon data units, and where the search term is adapted by causing it to be identified with a coupon data unit established by an seller entity so that the search engine 740 returns the coupon data unit when the search term is used to search the database. The first seller entity is then allowed the opportunity to begin the auction by making a monetary offer of the base price 1040.

Then, other seller entities are allowed the opportunity to make a higher monetary offer, and the step of waiting for monetary offers by other seller entities 1050 begins.

[0056] When, before the auction time limit expires, a second seller entity establishes a second coupon data unit and makes a higher monetary offer, the first seller entity performs the step of deciding whether to make a monetary offer higher than the current highest monetary offer 1060. When the first seller entity decides not to make a higher monetary offer, the first seller entity may no longer win auction 1065. However, when the first seller entity decides to make a higher monetary offer and does so, the first seller entity is returned to the step of waiting for monetary offers by other seller entities 1050.

[0057] When the auction time limits expires without a second seller entity making a higher monetary offer than the first seller entity, the first seller entity wins the auction and completes the step of paying the price of the winning monetary offer 1070, which is compensation for allowing the first seller entity to perform the step of selecting the coupon data unit to associate with the nominated search term 1080. Finally, the step of associating the coupon data unit selected by the seller entity with the nominated search term 1090 is performed, where the association lasts for a period of one month.

[0058] Alternatively, there may be a list of available search terms instead of seller entities being able to nominate any search term they choose. Also, there may alternatively be no base price associated with starting an auction. There may also be no preset time limit at which point the auction ends, where auctions alternatively end when there has been no activity within a certain time period. Also, there may alternatively be auctions for search terms by zip code. The period of time in which the nominated search

term is associated with the selected coupon data unit may be shorter than a month, or as long as forever.

[0059] Figure 11 illustrates a flow chart of a method of purchasing advertising space on a website through an auction 1100 according to an embodiment of the present invention. In operation, the first seller entity beings by accessing the seller entity site 1110, where there is no logging in process. The first seller entity then performs the step of selecting a desired advertising space 1120, where advertising space includes advertising space displayed on common website pages and advertising space displayed only in connection with website pages displaying search results for specific search terms. The first seller entity is then allowed the opportunity to begin the auction by making a monetary offer of the base price 1130 which is set by the site. Then, other seller entities are allowed the opportunity to make a higher monetary offer, and the step of waiting for monetary offers by other seller entities 1140 begins.

[0060] When, before the auction time limit expires, a second seller entity makes a higher monetary offer, the first seller entity performs the step of deciding whether to make a monetary offer higher than the current highest monetary offer 1150. When the first seller entity decides not to make a higher monetary offer, the first seller entity loses the auction 1155. However, when the first seller entity decides to make a higher monetary offer and does so, the first seller entity is returned to the step of waiting for monetary offers by other seller entities 1140.

[0061] When the auction time limits expires without a second seller entity making a higher monetary offer than the first seller entity, the first seller entity wins the auction and completes the step of paying the price of the winning monetary offer 1170, which is

compensation for allowing the first seller entity to perform the step of uploading the advertisement to be displayed 1180 in the purchased advertising space. Finally, the step of associating the advertisement uploaded by the seller entity with the advertising space selected by the seller entity 1190 is performed, where the association lasts for a period of one month.

[0062] Alternatively, there may be no base price associated with starting an auction. There may also be no preset time limit at which point the auction ends, where auctions alternatively end when there has been no activity within a certain time period. Also, there may be no auction, where seller entities pay a preset specific price for advertising space. Also, there may alternatively be auctions for advertising space by zip code. The period of time in which the selected advertising space is associated with the uploaded advertisement may be shorter than a month, or as long as forever.

[0063] Figure 12 illustrates a flow chart of a method of using a Blackberry device as a coupon storage device 1200 according to an embodiment of the present invention. In operation, the user begins by accessing a modified website with a Blackberry device 1210. When it is the first time of the user accessing the modified site with a Blackberry device 1210, the user may then continue by downloading a program to make the Blackberry device mimic a coupon storage device 1220. When it is not the first time of the user accessing the modified website with a Blackberry device 1210, the user does not have to download the program again. Once the program is downloaded, installed, and running, the Blackberry device may be used like a coupon storage device 100.

[0064] The next step in the method is wirelessly browsing, searching, and downloading coupon data units with the Blackberry device 1230 directly from the website into the

memory of the Blackberry device, where the website is available upon accessing a uniform resource identifier. Using the previously downloaded program, the user may continue by displaying a downloaded coupon data unit 1240. The user may then choose the option of displaying the coupon barcode on the display screen of the Blackberry for scanning by a barcode reader 1250.

[0065] Alternatively, the Blackberry device maybe one of a cell phone, personal digital assistant, notebook computer, and portable video game device. The website may alternatively not be modified for easier browsing by a Blackberry device. Also, there may be no program to download, with the Blackberry device simply running a script from the website to emulate a coupon storage device 100. There may alternatively be a printer, either directly attached to the Blackberry device, or accessible wirelessly.

[0066] Figure 13 illustrates the coupon website main screen 1300 according to an embodiment of the present invention. The coupon website main screen 1300 includes a "Search Coupons" button 1310, a "My Account" button 1320, a "Downloads" button 1330, a "News" button 1340, an "About" button 1350, a "Post Coupons" button 1360, new coupon data units 1370, featured coupon data units 1380, and advertisements 1390.

[0067] Clicking the "Search Coupons" button 1310 navigates the user to the search engine 790 where the user may perform coupon data unit searches. Clicking the "My Account" button 1320 allows the user to complete the step of signing in 930 to the registered user's account. Clicking on the "Downloads" button 1330 allows the user to access downloads for a coupon storage device 100. Clicking on the "News" button 1340 navigates the user to a webpage containing news about the website, the coupon storage device 100, and about coupon data units on the website. Clicking on the "About" button

1350 allows the user to read about the website. Clicking on the "Post Coupons" button allows the website to complete the step of checking if this is the first visit of the seller entity 812, so that the prospective seller entity may access the verified user website and choose from options including choosing to upload a coupon data unit 820, choosing to monitor coupon data units 830, choosing to make a monetary offer on a search term 840, and choosing to purchase advertising space 850.

[0068] Clicking on one of the new coupon data units 1370 allows the user to complete the step of viewing the selected coupon data unit 962. The new coupon data units 1370 are the coupon data units most recently posted during the entering the coupon value, associated product, brand, expiration date, restrictions, and barcode as text/numeric step 822. Clicking on one of the featured coupon data units 1380 allows the user to complete the step of viewing the selected coupon data unit 962. The featured coupon data units 1380 are the coupon data units designated as such during the making the coupon data unit a featured coupon data unit when desired step 826. Clicking on one of the advertisements 1390 navigates the user to the website of the seller entity. The advertisements 1390 are those uploaded during the step of uploading the advertisement to be displayed 1180.

[0069] In operation, a user accessing the coupon website main screen 1310, and may click on one of a "Search Coupons" button 1310, a "My Account" button 1320, a "Downloads" button 1330, a "News" button 1340, an "About" button 1350, a "Post Coupons" button 1360, new coupon data units 1370, featured coupon data units 1380, and advertisements 1390. Clicking the "Search Coupons" button 1310 navigates the user to the search engine 790 where the user may perform coupon data unit searches by inputting a search term 940. Clicking the "My Account" button 1320 allows the user to

complete the step of signing in 930 to the registered user's account, after which the user may perform one of the steps of tracking previously downloaded and viewed coupon data units 980, performing diagnostics 975 on the coupon storage device 100, keeping and viewing a watch list 985 of coupon data units to download, and viewing and sorting downloaded coupon data units 990 on the coupon storage device 100 of the user. Clicking on the "Downloads" button 1330 allows the user to access downloads for a coupon storage device 100. Clicking on the "News" button 1340 navigates the user to a webpage containing news about the website, the coupon storage device 100, and about coupon data units on the website. Clicking on the "About" button 1350 allows the user to read about the website. Clicking on the "Post Coupons" button allows the website to complete the step of checking if this visit is the first visit of the seller entity 812, so that the prospective seller entity may access the verified user website and choose from options including choosing to upload a coupon data unit 820, choosing to monitor coupon data units 830, choosing to make a monetary offer on a search term 840, and choosing to purchase advertising space 850.

[0070] Clicking on one of the new coupon data units 1370 allows the user to complete the step of viewing the selected coupon data unit 962, after which the user may perform the step of downloading the selected coupon data unit 964, or may choose to navigate back to the coupon website main screen 1300. Clicking on one of the featured coupon data units 1380 allows the user to complete the step of viewing the selected coupon data unit 962, after which the user may perform the step of downloading the selected coupon data unit 964, or may choose to navigate back to the coupon website main screen 1300.

Clicking on one of the advertisements 1390 navigates the user to the website of the seller entity.

[0071] Alternatively, the search engine 740 may be usable from the coupon website main screen 100. The "Downloads" button 1330 may allow the user to view previous downloads of the user, or may allow Blackberry device users to download a program that makes a Blackberry device emulate a coupon storage device 100. The steps of signing in 930 to the registered user's account and allowing the seller entity to log in when this visit is not the first visit of the seller entity 816 may be achievable directly from the coupon website main screen 1300.

[0072] [System-wide alternatives if not yet covered]

[Validate invention - explicitly explain how invention corrects the defects in the prior art as mentioned in the background.]

[0073] While particular elements, embodiments, and applications of the present invention have been shown and described, it is understood that the invention is not limited thereto because modifications may be made by those skilled in the art, particularly in light of the foregoing teaching. It is therefore contemplated by the appended claims to cover such modifications and incorporate those features which come within the spirit and scope of the invention.

CLAIMS

Put your claims in here

1. A XXXXXX including:

A;

B; and

C.

2. The XXXXX of claim 1 wherein said C is XXXXX.

3. The XXXXX of claim 1 further comprising a D.

4. A method for XXXXX including:

A-ing;

B-ing; and

C-ing.

5. The method of claim 4 further including:

D-ing.

6. The method of claim 4 wherein C-ing includes C-ing using an XXXX.

7. A system for [invention] including:

A;

B; and

C.

8. The system of claim 7 wherein said C is XXXXX.

9. The system of claim 7 further including a D.

ABSTRACT

A [method and/or system] is provided which [describe invention as claimed]

Patent Prosecution **80085**

We claim:

1. A coupon storage device including:

a memory storing a coupon data unit, wherein said coupon data unit includes data representative of a discount offered on a purchase of a specific good;

a computer interface adapted to attaching to a computer and loading said coupon data unit from said computer into said memory while said computer interface is attached to said computer, wherein said computer downloaded said coupon data unit from a website available upon accessing a uniform resource identifier;

a display screen adapted for displaying said coupon data unit, said displaying of said coupon data unit occurring while said computer interface is not attached to said computer; and

a processing unit adapted to controlling one of said storing, loading, and displaying said coupon.

2. The coupon storage device in claim 1, wherein:

said coupon data unit includes a barcode;

said display screen further displays said barcode; and

said barcode displayed on said display screen is adapted to be scanned by a barcode reader.

3. The coupon storage device in claim 1 further including:

a navigational component adapted to selecting a coupon data unit from a plurality of coupon data units stored in said memory.

4. The coupon storage device of claim 2, further including:

a detachable printer adapted for printing said barcode.

5. The coupon storage device of claim 1, wherein said computer interface is a Universal Serial Bus connection.

6. The coupon storage device of claim 1, further including:

a rechargeable battery.

7. The coupon storage device of claim 6, wherein said rechargeable battery is recharged while said device is attached to said computer.

8. The coupon storage device of claim 6, wherein said rechargeable battery provides power to said processing unit when said computer interface is detached from said computer.

9. A method for searching a database for a search term, said method including:

adapting a search term to be used to search a database of a plurality of coupon data units, wherein said search term is further adapted to be identified with an associated coupon data unit so that said associated coupon data unit is returned when said search term is used to search said database, wherein said associated coupon data unit includes data representative of a discount offered on a purchase of a specific good.

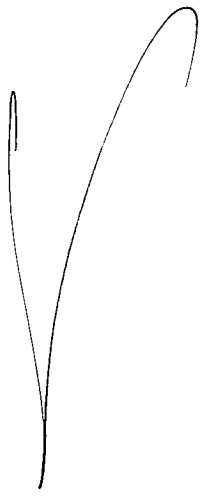
google?

10. The method of claim 9 further including:

displaying said associated coupon data unit when said search term is used to search said database.

11. The method of claim 9 further including:

allowing a seller entity the opportunity to make a payment of a specific price, said payment representing compensation for displaying an advertisement selected by said seller entity, wherein said advertisement is displayed when said search term is used to search said database.



12. A method for identifying a coupon data unit with a search term, said method including:

establishing a first coupon data unit including a first barcode, wherein said first coupon data unit is associated with a first seller entity, wherein said first coupon data unit includes data representative of a first discount offered on a purchase of a first specific good;

establishing a second coupon data unit including a second barcode, wherein said second coupon data unit is associated with a second seller entity, wherein said second coupon data unit includes data representative of a second discount offered on a purchase of a second specific good;

allowing one of said first seller entity and second seller entity to nominate a search term, wherein said search term is adapted to be used to search a database of a plurality of coupon data units, wherein said search term is adapted to be identified with an associated coupon data unit so that said associated coupon data unit is returned when said search term is used to search said database;

allowing said first seller entity the opportunity to make a first monetary offer representing compensation for identifying said first coupon data unit with said search term;

allowing said second seller entity the opportunity to make a second monetary offer representing compensation for identifying said second coupon data unit with said search term; and

identifying said search term with said first coupon data unit when said first monetary offer is greater than said second monetary offer.

13. The method of claim 12 further including:

displaying said associated coupon data unit when said search term is used to search said database.

14. The method of claim 12 further including:

allowing one of said first seller entity, said second seller entity, or a third seller entity the opportunity to make a payment of a specific price, said payment representing compensation for displaying an advertisement selected by said seller entity, wherein said advertisement is displayed when search results are returned after said search term is used to search said database.

15. An online couponing method including:

downloading a coupon data unit from a website into a computer, wherein said coupon data unit includes data representative of a discount offered on a purchase of a specific good, wherein ~~said website is available upon accessing a uniform resource~~ identifier;

loading said coupon data unit into a memory in a coupon storage device through a computer interface in said coupon storage device, wherein said coupon storage device is detachable from said computer; and

displaying said coupon data unit on a display screen on said coupon storage device, wherein said displaying occurs when said coupon storage device is detached from said computer.

16. The online couponing method of claim 15, wherein:

said coupon data unit includes a barcode;

said display screen further displays said barcode; and

said barcode displayed on said display screen is adapted to be scanned by a barcode reader.

17. The online couponing method of claim 16 further including:

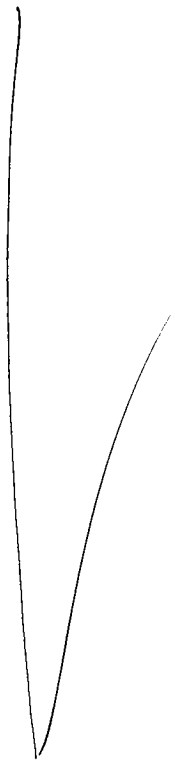
printing said barcode with a detachable printer attached to said coupon storage device.

18. The online couponing method of claim 15 further including:

selecting a coupon data unit from a plurality of coupon data units stored in said memory with a navigational component.

19. The online couponing method of claim 15 further including:

powering said coupon storage device with a rechargeable battery, wherein said rechargeable battery is recharged when said coupon storage device is attached to said computer.

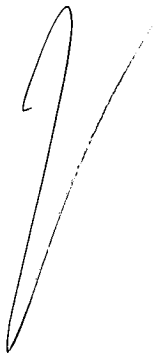


20. An online couponing method including:

downloading a coupon data unit from a website directly into a memory in a coupon storage device, wherein said coupon data unit includes data representative of a discount offered on a purchase of a specific good, wherein said website is available upon accessing a uniform resource identifier, wherein said coupon storage device accesses said uniform resource identifier wirelessly, wherein said coupon data unit includes a barcode;

displaying said barcode on a display screen on said coupon storage device, wherein said barcode displayed on said display screen is adapted to be scanned by a barcode reader.

21. The online couponing method of claim 20, wherein said coupon storage device is one of a cell phone, personal digital assistant, notebook computer, portable video game device, and Blackberry device.



22. An online coupon system including:

a remote server adapted to storing a plurality of coupon data units, wherein a coupon data unit includes data representative of a discount offered on a purchase of a specific good;

a database of said coupon data units on said remote server, wherein said database is adapted for allowing a search term to be used to search said database, wherein said search term is adapted to be identified with an associated coupon data unit so that said associated coupon data unit is returned when said search term is used to search said database.

Figure 1A

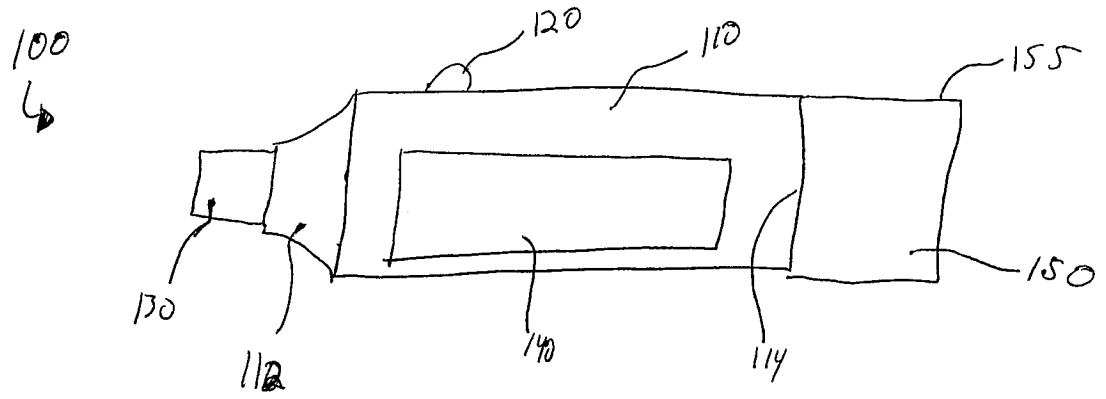


Figure 1B

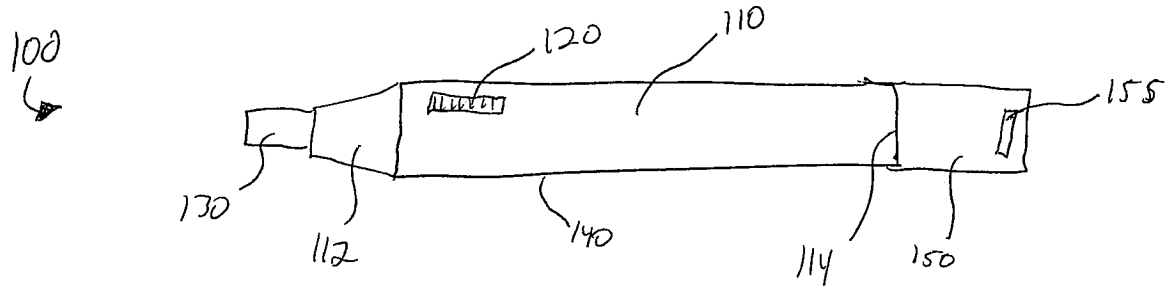


Figure 1C

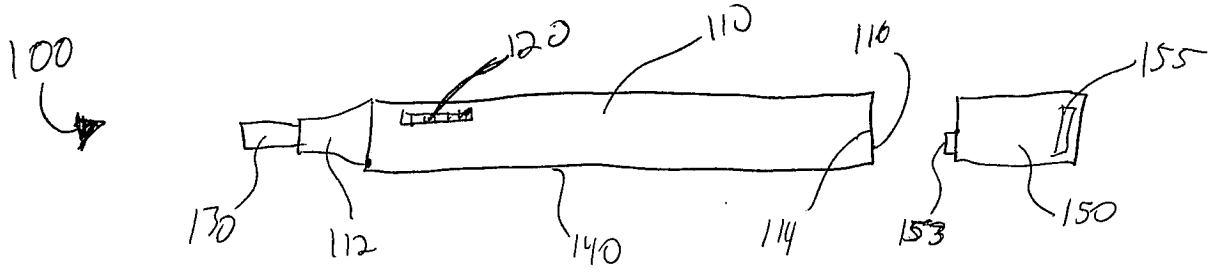
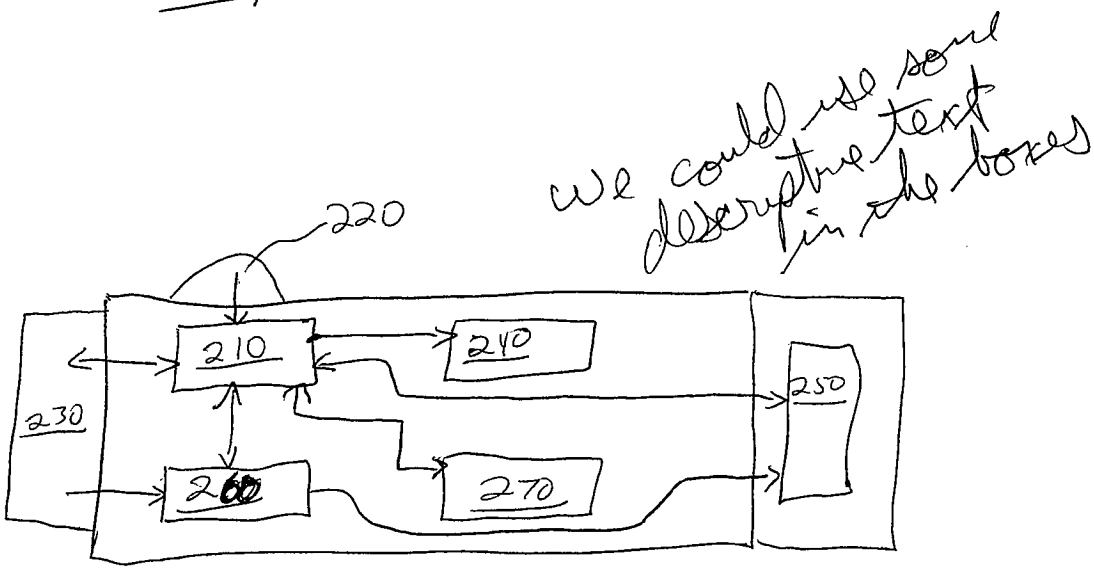


Figure 2

200



we could use some descriptive text in the boxes

Figure 3

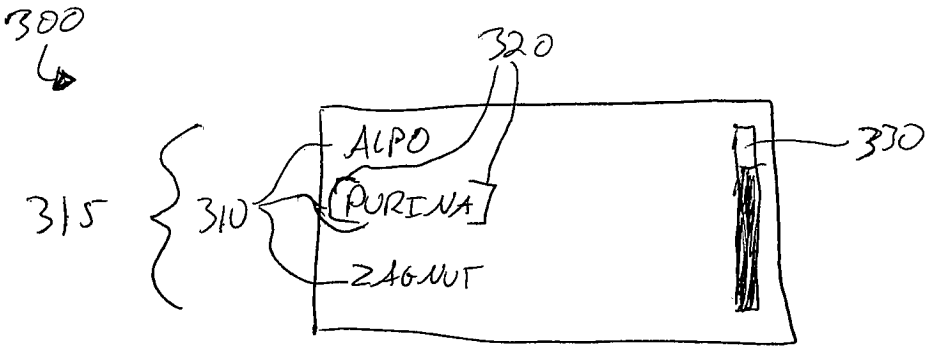
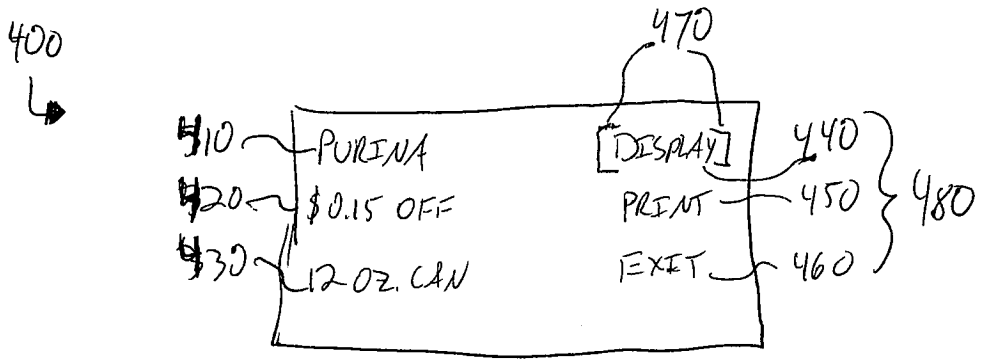


Figure 4



Operate frgt good!

Figure 5

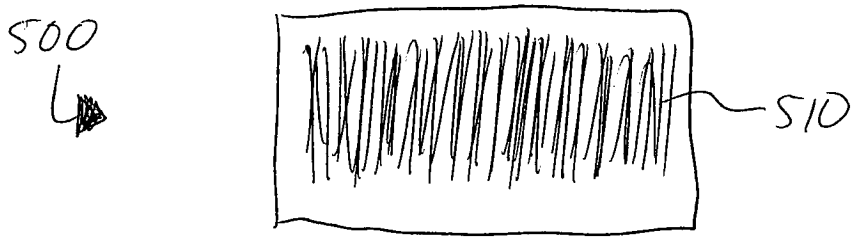
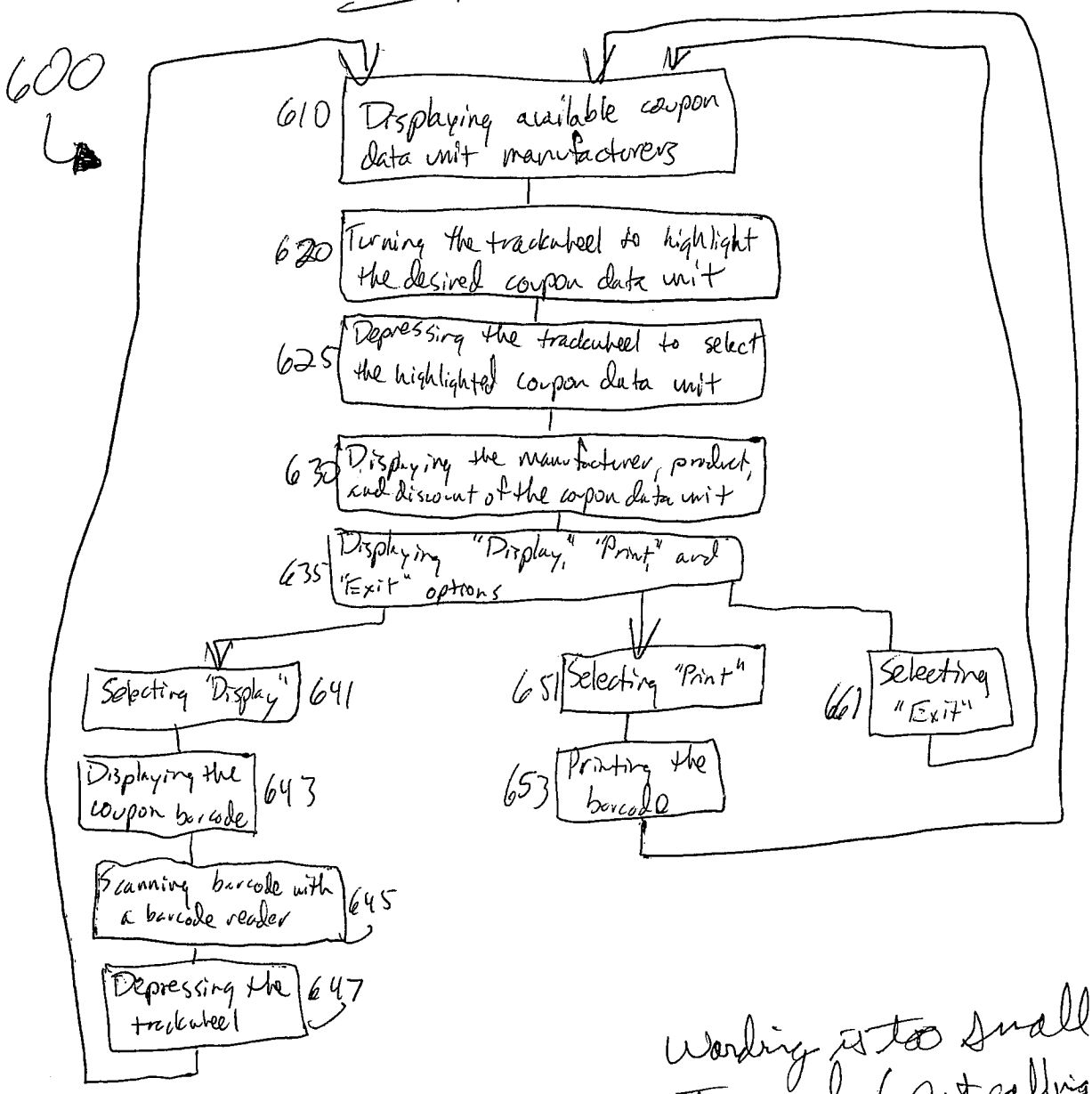


Figure 6



Lead lines?

Need arrows to show direction

Wording is too small & tough to read (Not calling the kettle black here!) But this is official work & the PTO, so either write better or use word

Figure 7

700

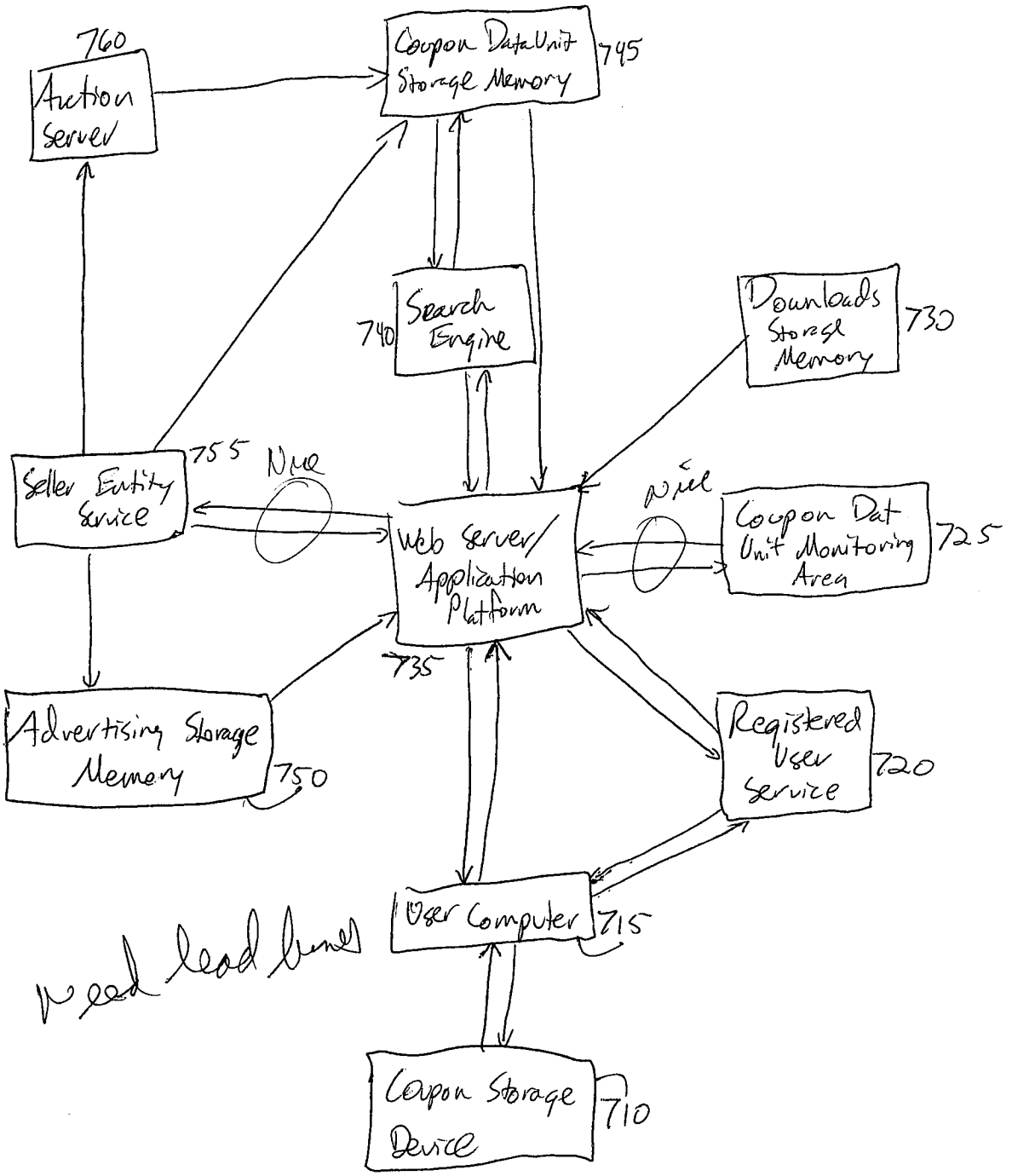
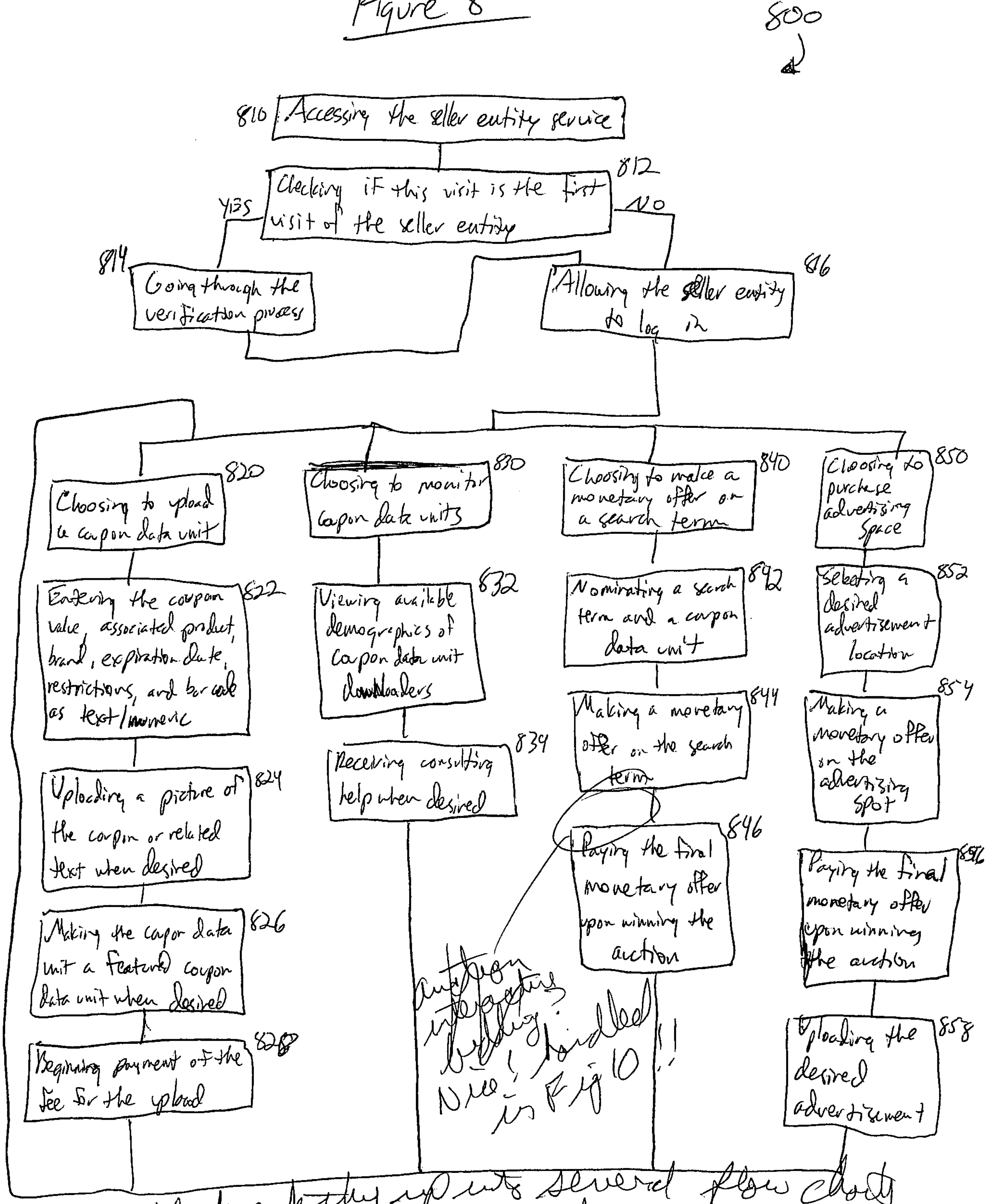
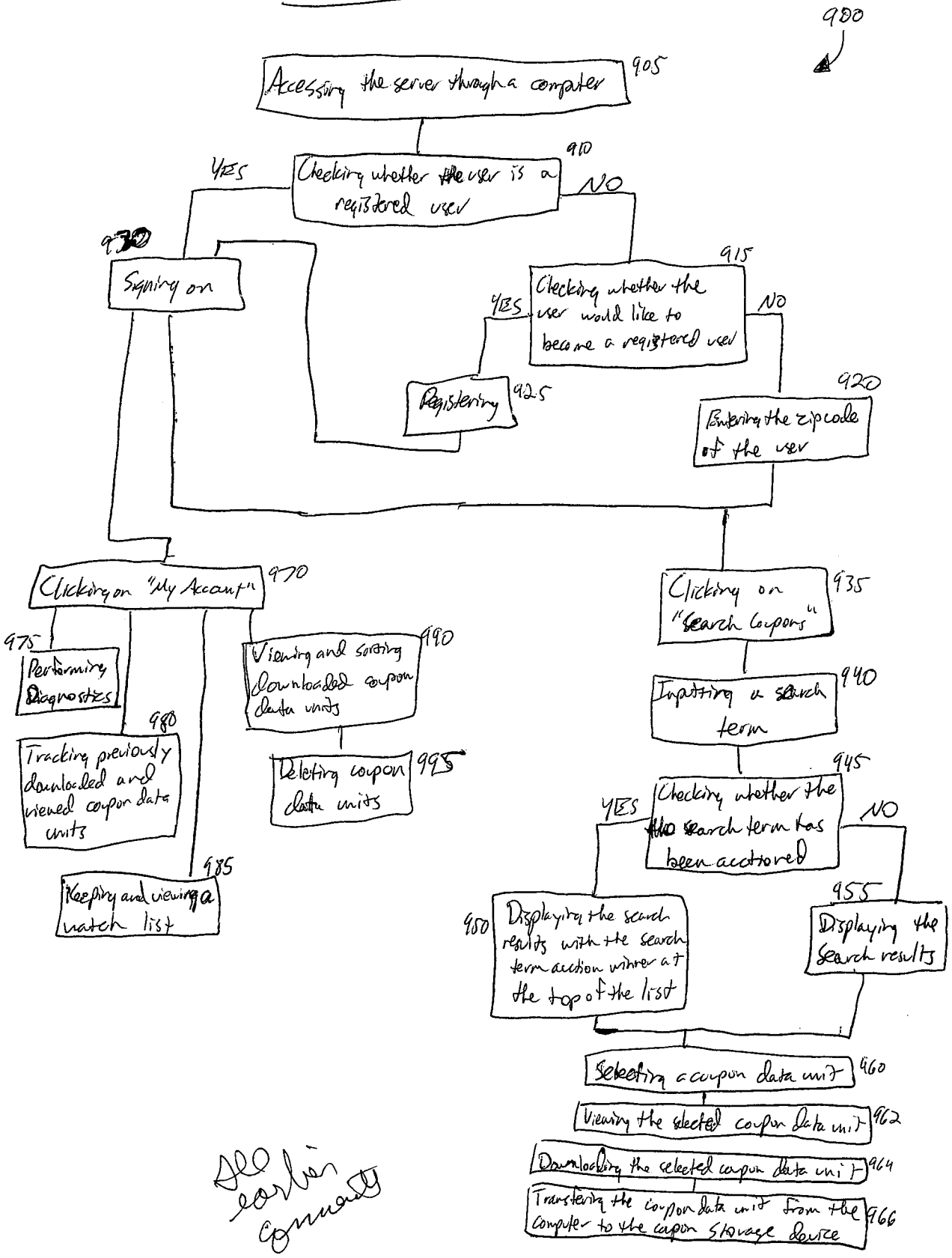

760
Auction Server
Coupon Data Unit Storage Memory
745
740
Search Engine
Downloads Stored Memory
730
755
Seller Entity Service
Web Server/ Application Platform
735
Coupon Dat Unit Monitoring Area
725
Advertising Storage Memory
750
Registered User Service
720
User Computer
715
Coupon Storage Device
710

Figure 8



– You could break this up into several flow charts
– I applaud your thoroughness – Too tough to read
– Use arrows to show flow

Figure 9



All earlier comments

Figure 10

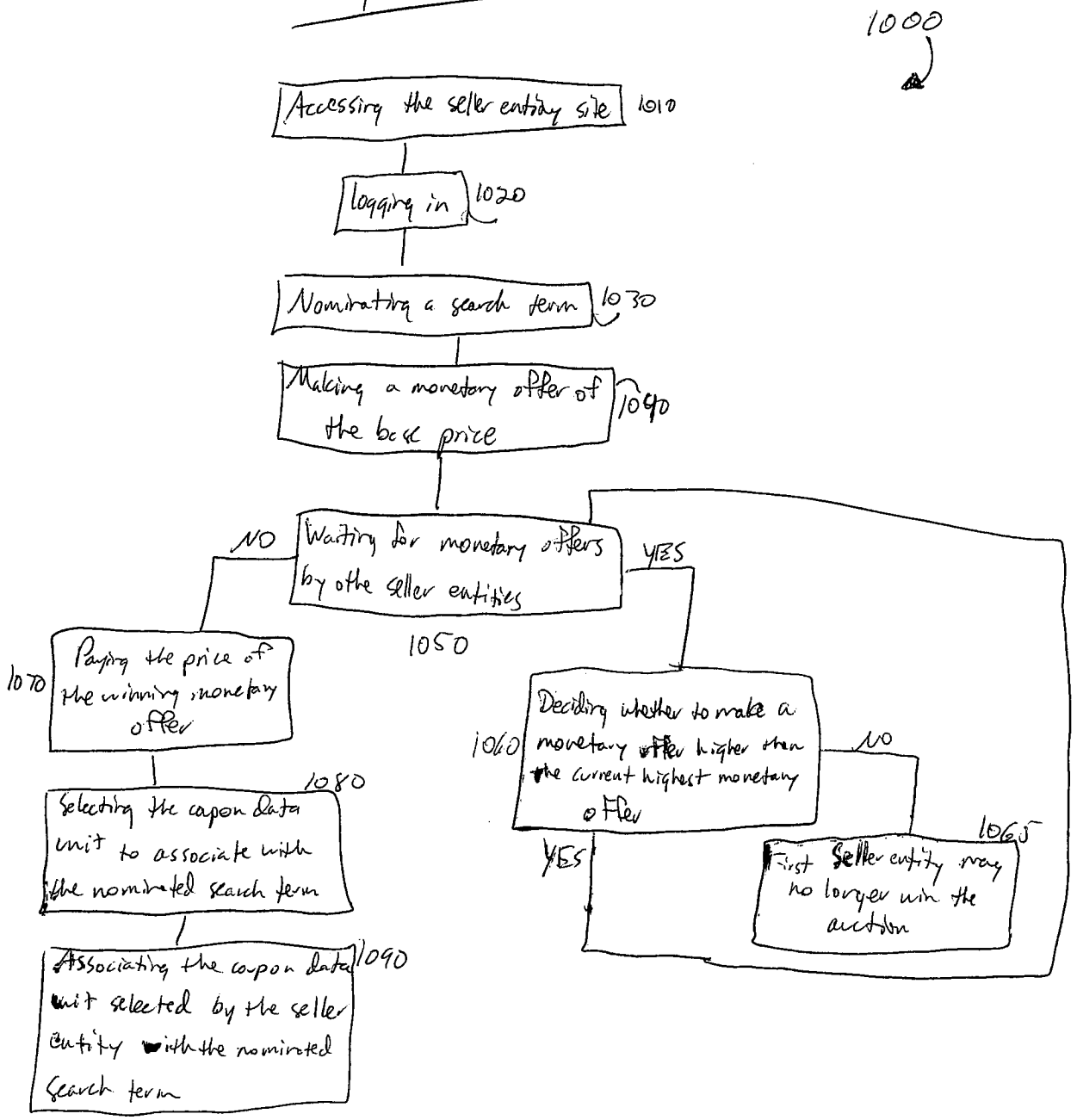

1000
Accessing the seller entity site
1010
logging in
1020
Nominating a search term
1030
Making a monetary offer of the best price
1040
Waiting for monetary offers by other seller entities
1050
NO
YES
Paying the price of the winning monetary offer
1070
Selecting the coupon data unit to associate with the nominated search term
1080
Associating the coupon data unit selected by the seller entity with the nominated search term
1090
Deciding whether to make a monetary offer higher than the current highest monetary offer
1060
NO
YES
First seller entity may no longer win the auction
1065

Figure 11

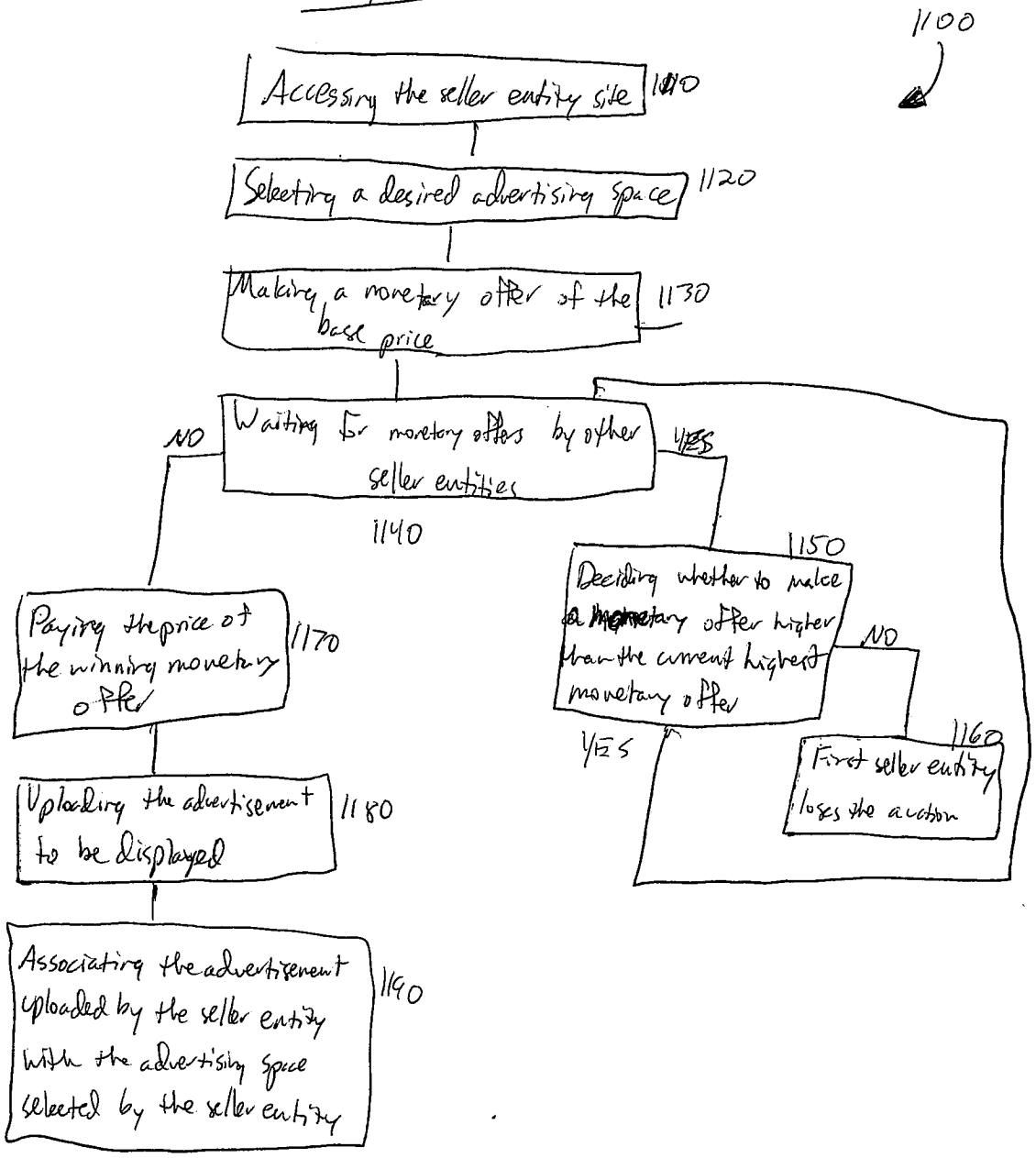

1100
Accessing the seller entity site
1110
Selecting a desired advertising space
1120
Making a monetary offer of the base price
1130
Waiting for monetary offers by other seller entities
1140
NO
YES
Paying the price of the winning monetary offer
1170
Uploading the advertisement to be displayed
1180
Associating the advertisement uploaded by the seller entity with the advertising space selected by the seller entity
1190
Deciding whether to make a monetary offer higher than the current highest monetary offer
1150
NO
YES
First seller entity loses the auction
1160

Figure 12

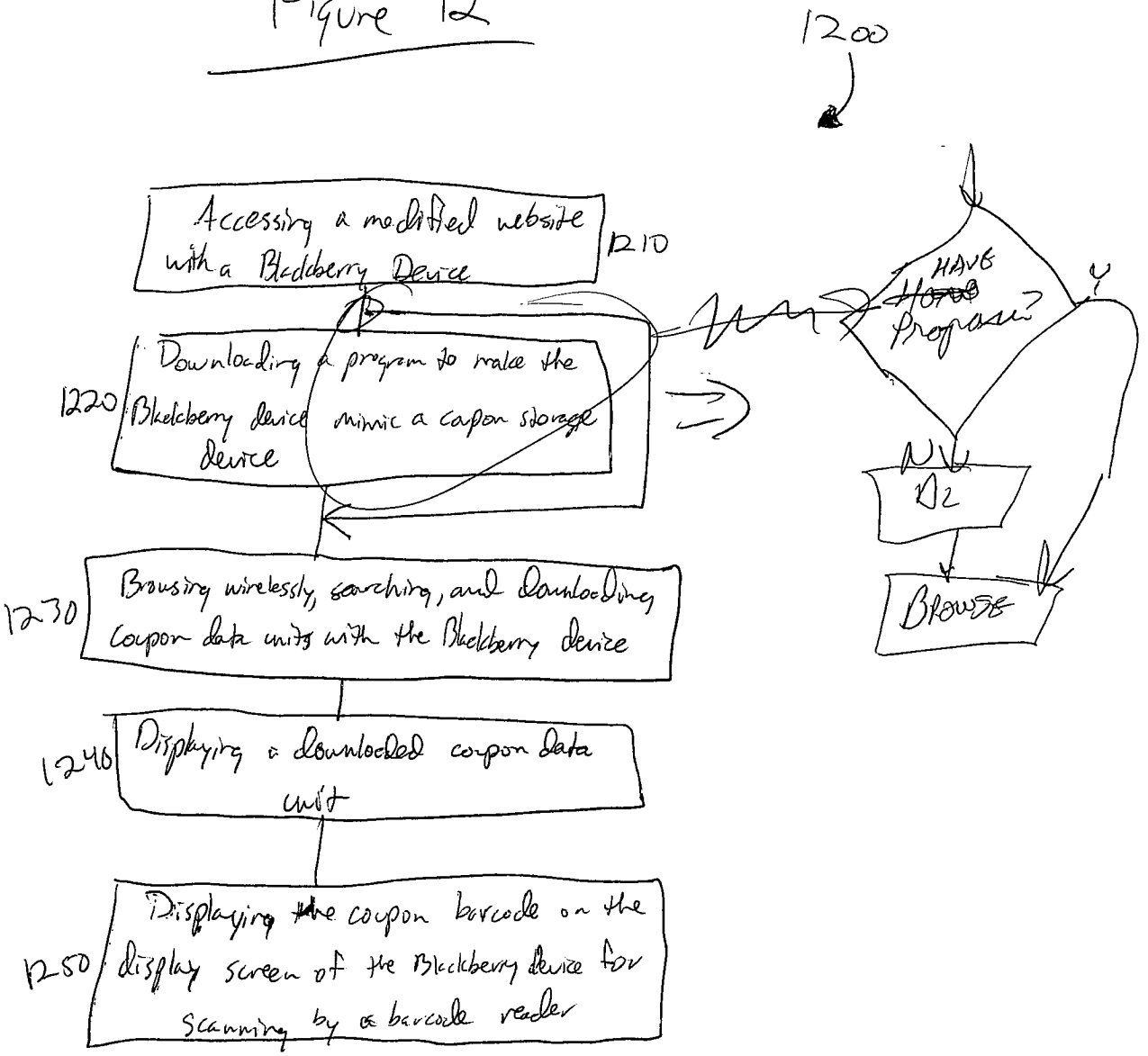
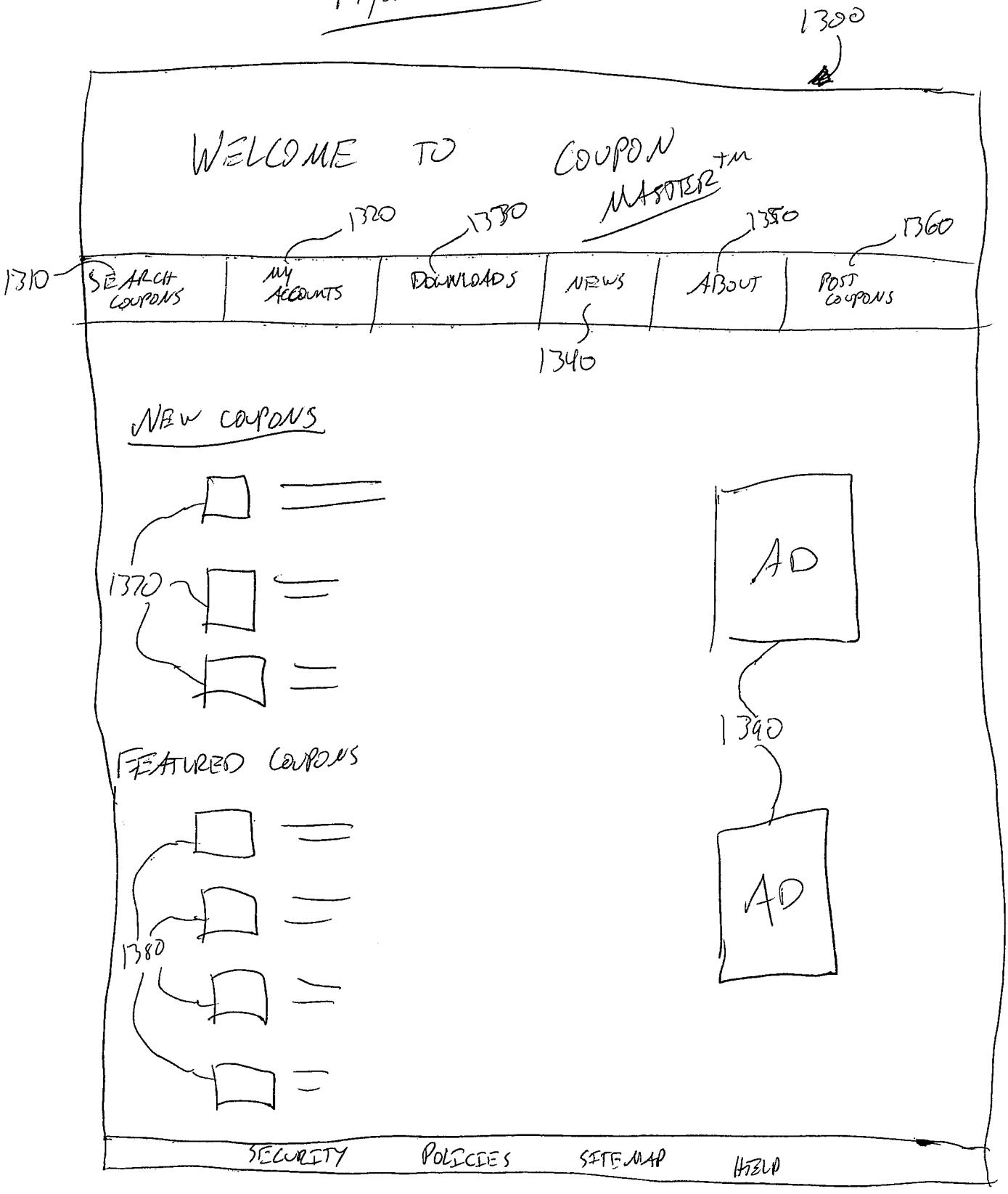

1200
Accessing a modified website with a Blackberry Device
1210
Downloading a program to make the Blackberry device mimic a coupon storage device
1220
HAVE Program?
Y
N
D2
Browse
Browsing wirelessly, searching, and downloading coupon data units with the Blackberry device
1230
Displaying a downloaded coupon data unit
1240
Displaying the coupon barcode on the display screen of the Blackberry device for scanning by a barcode reader
1250

Figure 13


1300
WELCOME TO COUPON MASTER™
1320
1330
1350
1360
1310
SEARCH COUPONS
MY ACCOUNTS
DOWNLOADS
NEWS
ABOUT
POST COUPONS
1340
NEW COUPONS
1370
AD
1390
FEATURED COUPONS
1380
AD
SECURITY
POLICIES
SITE MAP
HELP

#81998

Need the #'s from Template

Hmm maybe a better name? Even "coupon entity" would be better

Detailed Description of the Preferred Embodiments

Figure 1 illustrates a coupon redemption system 100 according to an embodiment of the present invention. In Figure 1, the coupon redemption system 100 includes an entity service 110, a coupon data unit storage memory 120, an auction server 130, a search engine 140, a web server/application platform 150, an advertising storage memory 160, a user computer 170, a removable electronic device 175, a downloads storage memory 180, a coupon monitoring service 185, and a registered user service 190.

In the coupon redemption system 100, the entity service 110 is in electronic communication with the coupon data unit storage memory 120, the auction server 130, the web server/application platform 150, and the advertising storage memory 160. The coupon data unit storage memory 120 is configured to send and receive electronic communication with the auction server 130, and the search engine 140. The coupon data unit storage memory 120 is also configured to provide data to the web server/application platform 150 electronically. The auction server 130 electronically communicates with the coupon storage and the entity service 110. The search engine 140 configured to send and receive electronic communication with the coupon data unit storage memory 120 and the web server/application platform 150.

The web server/application platform 150 is in ~~bilateral~~ electronic communication with the downloads storage memory 180, the registered user service 190, the user computer 170, the advertising storage memory 160, and the entity service 110. Furthermore, the web server/application platform 150 receives data electronically from the coupon data unit storage memory 120.

The downloads storage memory 180 is in bilateral communication with the web server/application platform 150. The coupon monitoring service 185 receives data from the web

A

Great Job
- Some small comments
1 - What is in the CAB+ portion of CDU?

server/application platform 150. The registered user service 190 is configured to send and receive electronic communication with the web server/application platform 150 and the user computer 170. The removable device 175 communicates bilaterally with the user computer 170.

In operation, the entity service 110 is accessible by entities that have been authorized to use the entity service 110. Entities are authorized to use the entity service 110 after they have been verified as an entity issuing legitimate coupon incentives for products or services. Authorized entities may access the entity service 110 through the web server/application platform 150.

Once an entity is authorized to use the entity service 110, the entity may send a coupon data unit to the coupon data unit storage memory 120. This coupon data unit is housed in a database on the coupon data unit storage memory 120, and includes data relevant to the coupon incentive offered by the entity, and may include the coupon incentive value in dollar or percentage form, the product associated with the coupon incentive, the brand of the product associated with the coupon incentive, the expiration date of the coupon incentive, geographical restrictions on the coupon incentive, restrictions on usage of the coupon incentive, or a bar code associated with the coupon incentive.

The entity service 110 allows authorized entities to access the advertising storage memory 160. Authorized entities interested in placing advertisements that will appear on the screen of a user computer 170, send advertising data to the advertising storage memory 160. The advertising data is then transmitted from the advertising storage memory 160 to the web server/application platform 150. The web server/application platform 150 then transmits the advertising data to the user computer 170 in a format adapted to be displayed as an advertisement on a display of the user computer 170.

Additionally, the entity service 110 also allows authorized entities to bid to have their coupon data units associated with a particular search term through an auction. The association of coupon data units with search terms is accomplished through an auction. The auction is conducted for a single search term, and is scheduled to start and begin at set times. During the period between the start and end times, any authorized entities may send monetary bids to associate their coupon data units associated with the particular search term to the auction server 130. At the end of the set time period, the search term is awarded to the entity sending highest monetary bid to auction server 130. Once the search term has been awarded to an entity, the auction server 130 transmits the search term data to a search term database on the coupon data unit storage memory 120 and the search term is associated with the coupon data unit of the awarded entity. The association between the coupon data unit and the search term preferably ends after a set time period (e.g. 1 month) or when the coupon incentive expires.

In operation, the user computer 170 may access search terms through the web server/application platform 150 either by communicating through the registered user service 190, or by communicating directly with the web server/application platform 150. The communication path between the user computer 170 and the web server/application platform 150 is determined by whether the user of the user computer 170 is a registered or unregistered user. If the user of the user computer 170 is a registered user, the user computer sends a login signal to the registered user service 190, and thereafter the user computer 170 communicates with the web server/application platform 150 through the registered user service 190. However, if the user of the user computer 170 is an unregistered user, the user computer does not send a login signal to the registered user service 190, and communicates directly with the web server/application platform 150.

When an unregistered user inputs a search term to the user computer 170, the user computer 170 sends a signal to the web server/application platform 150, which then sends a signal to the search engine 140 through the web server/application platform 150. The search engine 140 then searches the coupon data unit storage memory 120 for the entered search term. If the entered search term is found in the coupon data unit storage memory 120, the search engine 140 returns all or portions of the coupon data unit associated with the search term, to the web server/application platform 150. The web server/application platform 150 then returns the coupon data unit to the user computer 170. The user computer 170 then displays the displayable portions of the coupon data unit on the display of the user computer 170. The displayable portions of the coupon data unit may include text or graphics relevant to the coupon incentive.

If the entered search term is not found in the coupon data unit storage memory 120, the search engine 140 determines which search terms contained in the coupon data unit storage memory 120 are most relevant. The search engine determines which search terms are most relevant to the entered search term by comparing the entered search term to the search terms contained in the search term database. This comparison is based on factors including search term spelling and data contained in the coupon data unit including the coupon incentive value in dollar or percentage form, the product associated with the coupon incentive, the brand of the product associated with the coupon incentive, the expiration date of the coupon incentive, geographical restrictions on the coupon incentive, restrictions on usage of the coupon incentive, or a bar code associated with the coupon incentive. After the most relevant search term is determined the search engine 140 returns the coupon data unit associated with the most relevant search terms to the web server/application platform 150. The web server/application platform 150 then returns the coupon data unit to the user computer 170. The user computer 170 then displays the

displayable portions of the coupon data unit on the display of the user computer 170. The displayable portions of the coupon data unit may include text or graphics relevant to the coupon incentive.

When a registered user inputs a search term to the user computer 170, the coupon redemption system 100 operates in the same manner as if an unregistered user had input the search term, with the only difference being that the communication between the user computer 170 and the web server/application platform 150 flow through the registered user service 190.

After the user computer 170 receives the coupon data unit, the user computer 170 may also transmit all, or portions of the coupon data unit associated with the entered search term, to the removable electronic device 175. The removable electronic device is powered by a separate power source from the user computer 170, and may be removed from the user computer 170.

The user computer 170 may also send a signal to the web server/application platform 150 requesting a coupon data unit without inputting a search term. If this signal is sent from an unregistered user, the user computer 170 sends the signal directly to the web server/application platform 150, which then sends a signal to the coupon data unit storage memory 120. The coupon data unit storage memory 120 then transmits all or portions of the requested coupon data unit to the web server/application platform 150, which then transmits the data to the user computer 170. Once the data is received by the user computer 170, all, or portions of the data, may be transmitted to the removable electronic device 175.

When a registered user sends a signal to the web server/application platform 150 requesting a coupon data unit without inputting a search term, the coupon redemption system 100 operates in the same manner as if an unregistered user had input the search term, with the

only difference being that the communication between the user computer 170 and the web server/application platform 150 flow through the registered user service 190.

In operation, the downloads storage memory 180 stores data accessible by the user computer 170. In order to access the data stored in the downloads storage memory 180, the user computer 170 sends a signal to the web server/application platform 150 requesting data from the downloads storage memory 180, either directly from the user computer 170 when the signal is sent by unregistered users of the user computer 170, or through the registered user service 190 when the signal is sent by registered users of the user computer 170. The web server/application platform 150 then sends a signal to the downloads storage memory 180, and the downloads storage memory 180 returns data to the web server/application platform 150. Next, the web server/application platform 150 transmits the data to the user computer 170 either directly, for unregistered users of the user computer 170, or through the registered user service 190, for registered users of the user computer 170. Once the data is received by the user computer 170, all, or portions of the data, may be transmitted to the removable electronic device 175.

Each time the user computer 170 sends a signal to the web server/application platform 150, regardless of whether the signal comes to the web server/application platform 150 directly from the user computer 170, or through the registered user service 190, the web server/application platform 150 sends signal data to the coupon monitoring service 185. This signal data may include the number of signals sent by the user computer 170 requesting coupon data units, or the search terms input into the user computer 170. In operation, the coupon monitoring service 185 tracks and stores the signal data of user computer 170, as well as demographic data related to the user computer 170. This demographic data may include the internet service provider location (ISP location) or the internet protocol address (IP address) of

the user computer 170. Additionally, the coupon monitoring service 185 is also configured to link the demographic data related to the user computer 170 and the signals data sent by the user computer 170 to the web server/application platform 150.

In the case of registered users, demographic data associated with the registered user, along with data obtained through HTTP cookies, is sent from the user computer 170 to the registered user service 190. The registered user service 190 then transmits the data to the web server/application platform 150, which in turn sends the demographic data to the coupon monitoring service 185 where it is linked to the signal data.

In the case of unregistered users, demographic data related to the unregistered user is obtained through HTTP cookies and other communication between the user computer 170 and the web server/application platform 150. The demographic data is transferred from the user computer 170 to the web server/application platform 150, and then to the coupon monitoring service 185 where it is linked to the signal data.

In operation, the removable electronic device 175 is configured to store and display coupon data units received from the user computer 170. Once all or part of the coupon data unit is stored on the removable electronic device 175, the user of the removable electronic device 175 may disconnect the removable electronic device 175 from the user computer 170. The user of the removable electronic device 175 may then take the removable electronic device to a retail store and display the displayable portions of the coupon data unit, such as a bar code associated with a coupon incentive. The displayed bar code is then scanned at the retail store to redeem the coupon incentive.

In an alternative embodiment of the coupon redemption system 100, the coupon data unit sent to the coupon storage memory 120 from entity service 110 may include a bar code

expressed in a text, numeric or graphic form. The coupon data unit may also include graphics or text associated with the coupon incentive or the product.

In another alternative of the coupon redemption system 100, the search engine 140 BIDIRECTIONALLY ~~bilaterally~~ communicates with the auction server 130, the coupon data unit storage memory 120, and the web server/application platform 150. In operation, the auction server 130 stores search terms that have been associated with coupon data units stored in the coupon data unit storage memory 120. When a search term is entered by an unregistered user into the user computer 170, the user computer 170 sends a signal to the web server/application platform 150. The web server/application platform 150 then sends a signal to the search engine 140 and the search engine 140 searches the auction server 130 for the entered search term. If the entered search term is found in the auction server 130, the auction server sends a signal to the coupon data unit storage memory 120. When the coupon data unit storage memory 120 receives this signal it returns all, or portions of the coupon data unit associated with the search term, to the search engine 140, which in turn returns the data to the web server/application platform 150. The web server/application platform 150 then returns the coupon data unit to the user computer 170.

When a registered user inputs a search term to the user computer 170, this alternative embodiment of the coupon redemption system 100 operates in the same manner as if an unregistered user had input the search term, with the only difference being that the communication between the user computer 170 and the web server/application platform 150 flow through the registered user service 190.

In another embodiment of the coupon redemption system 100, the auction server 130 receives multiple monetary bids from the entity service 110 for the same search term and stores them separately according to geographic identifying information. In this embodiment, multiple

auctions are conducted for a single search term, allowing authorized entities to bid to have their coupon data units associated with a particular search term through the entity service 110. Each auction for the search term is conducted for a specified single geographic area, and is scheduled to start and begin at set times. During the period between the start and end times, any authorized entities may send monetary bids to associate their coupon data units associated with the particular search term to the auction server 130. At the end of the set time period, the search term is awarded to the entity sending highest monetary bid to auction server 130 for the specified single geographic area. Once the search term has been awarded to an entity, the auction server 130 transmits the search term data to the coupon data unit storage memory 120 and the search term is associated with the coupon data unit of the awarded entity and the specified single geographic area.

When registered or unregistered users of a user computer 170 located in the specified single geographic area input a search term into the user computer 170, the user computer 170 sends a signal to the web server/application platform 150 either directly or through the registered user service 190, for unregistered users and registered users respectively. The web server/application platform then sends a signal to the search engine 140, and the search engine searches the coupon data unit storage memory 120 for the exact search term associated with the specified single geographic area. If the search engine 140 finds the same search term associated with the specified single geographic area, the search engine returns all or part of the coupon data unit associated with the search term and the geographic area to the web server/application platform 150. If the search engine 140 is unable to find a search term associated with the specified single geographic area, the search engine 140 may return all or part of a coupon data unit associated with a geographic area near the specified single geographic area, or the search

engine 140, or the search engine 140 may return a coupon data unit associated with the search term, but that is not associated with any geographic location, to the web server/application platform 150.

In another embodiment of the coupon redemption system 100, the entity service 110 allows authorized entities to upload monetary bids to the auction server 130 to display their advertising data stored on the advertising storage memory 160 as an advertisement on a display of the user computer 170. The auction is conducted for a specified advertising space to be displayed on the display of user computer 170, and is scheduled to start and begin at set times. In operation, the entity service 110 sends monetary bids of authorized entities to the auction server 130 during the period between the start and end times of the auction. At the end of the set time period, the specified advertising space to be displayed on the display of the user computer 170 is awarded to the entity sending highest monetary bid to auction server 130. Once the advertising space has been awarded to an entity, the auction server 130 sends a signal to the entity service 110, and the entity service 110 sends a signal to the web server/application platform 150. The web server/application platform 150 then sends a signal to the advertising storage memory 160, and the advertising storage memory returns the advertising data sent by the entity awarded the advertising space. Finally, the web server/application returns the advertising data to the user computer 170 to be displayed as an advertisement in the advertising space specified in the auction.

In another alternative embodiment of the coupon redemption system 100, each search term is associated with any relevant coupon data unit stored in the coupon data unit storage memory 120. However, the entity service 110 also allows authorized entities to bid to have their coupon data units associated with a particular search term through an auction. The association of

coupon data units with search terms is accomplished through an auction. The auction is conducted for a single search term, and is scheduled to start and begin at set times. During the period between the start and end times, any authorized entities may send monetary bids to associate their coupon data units associated with the particular search term to the auction server 130. At the end of the set time period, the search term is awarded to the entity sending highest monetary bid to auction server 130. Once the search term has been awarded to an entity, the auction server 130 transmits the search term data to the coupon data unit storage memory 120 and the search term is associated with the coupon data unit of the awarded entity.

When a user enters the search term into the user computer 170, the search engine will return all coupon data units associated with the search term to the web server/application platform 150. However, the web server/application platform will return the data to the user computer 170 in a format such that the coupon data unit of the awarded entity is displayed first on the display of the user computer 170.

In another alternative embodiment of the coupon redemption system 100, when an unregistered user sends a signal from the user computer 170 to the web server/application platform 150, the web server/application platform 150 returns a signal requiring the unregistered user of the user computer 170 to input data identifying the geographic location of the user computer 170 prior to allowing the user computer 170 to send requests through the web server/application platform 150 to the search engine 140, the downloads storage memory 180, or the coupon data unit storage memory 120. Acceptable data identifying the geographic location of the user computer 170 include city, county, state and country names or postal codes. Once the data identifying the geographic location of the user computer 170 has been transmitted to the

web server/application platform 150, the coupon monitoring service 185 associates this data with the signals sent between the user computer 170 and the web server/application platform 150.

Another alternative embodiment of the coupon redemption system 100 eliminates the removable electronic device 175. In this embodiment, the user computer 170 may be any lightweight, easily portable electronic device, such as a web enabled cell phone, a smart phone, a BlackBerry, or a laptop computer. In operation, the easily portable electronic device downloads coupon data unit management software stored in the downloads storage memory 180. The easily portable electronic device accomplishes this download by sending a signal to the web server/application platform 150, which in turn sends a signal to the downloads storage memory 180. The downloads storage memory then returns the data to the web server/application platform 150, which returns the data to the easily portable electronic device. Once the coupon data unit management software has been installed on the easily portable electronic device, the easily portable electronic device may store and display coupon data units received from the user computer 170. The user of the easily portable electronic device may then take the easily portable electronic device to a retail store and display the displayable portions of the coupon data unit, such as a bar code associated with a coupon incentive. The displayed bar code is then scanned at the retail store to redeem the coupon incentive.

In an alternative embodiment of the coupon redemption system 100, the coupon data unit storage memory 120, downloads storage memory 180, advertising storage memory 160, coupon monitoring service 185, auction server 130, and entity service 110 may all be housed in the same memory, or may all be housed in separate memories. Furthermore, a combination of less than all of the elements of the coupon redemption system 100 including the coupon data unit storage memory 120, downloads storage memory 180, advertising storage memory 160, coupon

monitoring service 185, auction server 130, and entity service 110 may be housed in the same location.

Figure 2 illustrates a web user interface 200 associated with the web server/application platform 150. The web user interface 200 includes a search coupons link 210, a my account link 220, a downloads link 230, a news link 240, an about link 250, a post coupons link 255, a security link 270, a policies link 275, and a basic services banner 270. The web user interface 200 also includes an advertising space 260, an advertising space 265, a new coupons space 275, and a featured coupons space 280.

In operation, the search coupons link 210 allows a user of the web user interface 200 to search coupon incentives stored in a database in the coupon data unit storage memory 120 of Figure 1 using search terms. When a user clicks on the search coupons link 210, the user is prompted to login if the user is a registered user, or to proceed to search coupons if the user is an unregistered user. Unregistered users may also be prompted to enter their zip code or other information identifying their geographic location. Once the registered user has logged in, or the unregistered user has clicked the "proceed to search coupons" link or entered their zip code, the registered or unregistered user enters a search term in a search field. The web user interface 200 then transmits the search term entered in the search field to the search engine 140 of Figure 1. If the search term is found in the search terms database in the coupon data unit storage memory 120 of Figure 1, the search engine 140 of Figure 1 returns the coupon data units associated with the search term, and the website user interface 200 displays the coupon data unit of the winning entity associated with the search term first. If the search term is not found on in the search term database, the search engine 140 of Figure 1 determines which coupons best match the entered

search term. The web user interface 200 then displays the coupon data units determined to be the best match first, and then displays any other related coupon data units in order of relevance.

Regardless of whether the user is registered or unregistered, the user may scroll through the displayed coupon data units and select a coupon and the list of coupon data units may be sorted by manufacturer or type of good or service. When the user selects a coupon data unit, a new screen displays the coupon data unit and all of the restrictions entered by the entity through the entity service 110 of Figure 1. Both registered and unregistered users may download the coupon data units to the user computer 170 of Figure 1 by clicking on the displayed coupon data units or on a separate download coupon link.

In operation, the my account link 220 allows registered users to access the registered user service 190 of Figure 1. Users of the web user interface 200 may become registered users by setting up an account. As part of the account setup process, the user is asked for their demographic information including age, gender, location, product preferences, or buying habits. Once a user is registered, the user may access their account by clicking on the my account link 220, which directs them to a my account page. Through the my account page, the user will be able to access the search coupons function 210, track the coupon data units they have previously downloaded, and keep a watch list of coupon data units to download. The user may also link directly to other coupon incentives offered by the same entity or other similar coupons that are now available through the web user interface 200.

In operation, the downloads link 230 allows users to access software updates or technical support links.

The news link 240 directs users to a web page containing recent changes in the web user interface 200.

The about link 250 directs users to a web page explaining how the web user interface operates, including information regarding the differences between registered user and unregistered user access.

In operation, the post coupons link 255 allows entities interested in posting coupon incentives on the web user interface 200 to access the entity service 110 of Figure 1. When the entity clicks on the post coupons link 255 the entity is directed to a verification or login web page. If the entity has previously been verified and has established an entity service account, the entity will be prompted to login. If the entity does not have an entity service account, the entity will be prompted to enter information necessary to verify the entity including contact information and the types of services or products offered.

Once the entity has logged in, the entity may post coupon incentives through the entity service 110 of Figure 1. The interface requests information from the entity regarding the coupon incentive including the coupon incentive value in dollar or percentage form, the product associated with the coupon incentive, the brand of the product associated with the coupon incentive, the expiration date of the coupon incentive, geographical restrictions on the coupon incentive, restrictions on usage of the coupon incentive, or a bar code associated with the coupon incentive. Additionally, the entity may access the advertising storage memory and search term auction features through the entity service 110. Through this interface entities may place monetary bids to associate search terms with their posted coupon incentives stored as coupon data units on the coupon data unit storage memory 120 of Figure 1, or upload advertising data to the advertising storage memory 160 of Figure 1.

Entities may also access information related to their uploaded coupon data units through the coupon monitoring service 185 of Figure 1. The coupon monitoring service 185 of Figure 1

provides data related to the number of times the coupon has been viewed or downloaded, as well as non-personally identifiable statistical information associated with the coupon data unit. This non-personally identifiable statistical information may include the ISP or IP address of the user computer 170 of Figure 1 for unregistered users, or demographic information (e.g. age or gender) for registered users.

Advertising space 260 and advertising space 265 operate to define the advertising space that advertising data sent by entities to the advertising storage memory 160 will be displayed in.

In operation the basic services link 270 allows users to access information regarding security, policies, sitemap and help for the web user interface 200.

In operation, the new coupons space 275 lists coupon data units recently posted through the web user interface 200.

In operation, the featured coupons space 280 lists coupon data units designated as featured coupons by entities through the entity service 110 of Figure 1.

In operation the policies link 275 allows users to access information regarding the operation policies of the web user interface 200.

In an alternative embodiment, coupon data units may only be downloaded in an encoded format, and the user will not be able to display or print the coupon data unit without special decoding software that is available through the website, or comes pre-installed on the removable electronic device 175 of Figure 1.

In another alternative embodiment of the web user interface 200, registered users may access tools to help them display and manage coupon data units stored on their removable electronic device 175 of Figure 1 through the my accounts page. By clicking the my account link 220, the registered user enters the my account page. Through this page, the registered user

may display a list of all coupon data units currently stored on the removable electronic device 175, and may sort the coupon data units based criteria including on manufacturer, age, and type of good. The user may also remove coupons coupon data units or reorder the list of coupon data units as desired. The user may also perform diagnostics on their removable electronic device 175 of Figure 1, and may download any software updates.

In the event the registered user is accessing the web user interface 200 through a lightweight portable electronic device such as a BlackBerry or a smart phone, the user will be able to display a list of all coupon data units currently stored on the lightweight portable electronic device, and may sort the coupon data units based criteria including on manufacturer, age, and type of good. The user may also remove coupon data units or reorder the list of coupon data units as desired. The user may also perform diagnostics on their lightweight portable electronic device, and may download any software updates.

Unregistered users are not provided with these tools, unregistered users will not be able to manage their coupon data units.

Figure 3 illustrates a removable electronic device 300. The removable electronic device 300 includes a data port 310, a navigation input mechanism 320, an electronic signal processor 370, an electronic display 340, a power source 350, a memory 360, and a printer 330.

In the removable electronic device 300, the data port 310 is electrically connected to the power source 350. The data port 310 is configured to communicate bilaterally with the electronic signal processor 370. The navigation input mechanism 320 is electrically connected to the electronic signal processor 370. The electronic display 340 is electrically connected to the electronic signal processor 370. The memory 350 is communicates bilaterally with the electronic

signal processor 370. The printer 330 is electrically connected to the power source 350 and communicates bilaterally with the electronic signal processor 370.

In operation, the data port 310 electrically connects the removable electronic device 300 to the user computer 170 of Figure 1, and allows the user computer 170 of Figure 1 to transmit data to the removable electronic device 300. When the removable electronic device 300 is electrically connected to the user computer 170 of Figure 1, the electronic signal processor 370 sends a signal to the data port 310. The data port 310 then sends a signal to the user computer 170 of Figure 1. When the user computer 170 of Figure 1 sends data to the data port 310, the data port 310 transmits the data to the electronic signal processor 370. The electronic signal processor 370 then transmits the data to the memory 350, where the data is stored.

In operation, the navigation input mechanism 320 provides input from a user to control the removable electronic device 300. The navigation input mechanism 320 is configured to send several different types of signals to the electronic signal processor 370. The signal sent from the navigation input mechanism 320 to the electronic signal processor 370 may be related to the electronic display 340, the memory 350, the data port 310, or the printer 330. If the navigation input mechanism 320 sends a signal related to the electronic display 340 to the electronic signal processor 370, the electronic signal processor 370 sends a signal to the electronic display 340. If the navigation input mechanism 320 sends a signal related to the memory 350 to the electronic signal processor 370, the electronic signal processor 370 sends a signal to the memory 350. If the navigation input mechanism 320 sends a signal related to the printer 330 to the electronic signal processor 370, the electronic signal processor 370 sends a signal to the printer 330. Finally, if the navigation input mechanism 320 sends a signal related to the data port 310 to the

electronic signal processor 370, the electronic signal processor 370 sends a signal to the data port 310.

In operation, electronic signal processor 370 is also configured to manage and transfer storage of data on the memory 350, and to control the electronic display 340 and printer 330. When the electronic signal processor 370 receives a signal from the navigation input mechanism 320 to display data stored in the memory 350, the electronic signal processor 370 sends a signal to the memory 350. The memory 350 then returns data to the electronic signal processor 370, which then sends data to the electronic display 340, and the electronic display 340 displays the data as text or graphics.

If the electronic signal processor receives a signal from the navigation input mechanism 320 to send data stored on the memory 350 to the printer 330, the electronic signal processor 370 sends a signal to the memory 350. The memory 350 then returns data to the electronic signal processor 370, which then sends data to the printer 330, and the printer 330 outputs the data as text or graphics printed on a printable medium.

If the electronic signal processor 370 receives a signal from either the navigation input mechanism 320, or from the user computer 170 of Figure 1 through the data port 310 to delete or manipulate data stored on the memory 350, the electronic signal processor 370 sends a signal to the memory 350 and the data is manipulated or deleted.

In operation, the electronic signal processor 370 stores data in a database on the memory 350. Where the data stored on the memory 350 is a coupon data unit, or portion? that contains information transmitted by an entity through the entity service 110 to the coupon data unit storage memory 120 of Figure 1, the data includes information related to the coupon incentive. This data may include the manufacturer, coupon description, product description, or barcode as established by

the entity when it transmitted the coupon data unit to the coupon data unit storage memory 120 of Figure 1. However, because the removable electronic device 300 is limited to the size of the memory 350, the amount of data that may be stored on the memory 350 for each coupon data unit is limited in order to allow storage of a plurality of coupon data units on the memory 350. Thus, if a coupon data unit contains descriptions or manufacturer information in excess of a set maximum size (e.g. 15 characters), the electronic signal processor 370 truncates the description. The electronic signal processor 370 also indexes the coupon data unit in the database on the memory 350 according to information related to the coupon incentive, such as the manufacturer name, or product name.

Additionally, the electronic signal processor 370 is configured to manage the power supply of the removable electronic device 300. In order to accomplish this, the electronic signal processor 370 may turn off or limit the flow of electricity to the electronic display 340, the memory 350, or the printer 330 in order to conserve power when the electronic signal processor 370 does not receive an input signal from the navigation input mechanism 320 for a predetermined time period (e.g. 30 seconds). However, when the electronic signal processor 370 receives a signal from the navigation input mechanism 320, the electronic signal processor 370 restores power to the removable electronic device 300.

The power source 350 operates to supply power to removable electronic device 300. The power source 350 may send power to the data port 310, the electrical signal processor 370, the memory 350, the electronic display 340, and the printer 330. charging power source?

In an alternative embodiment of the removable electronic device 300 the data port 310 is a universal serial bus (USB) port. In this embodiment, when the data port 310 is electrically connected to the user computer 170 of Figure 1, electrical current flows from the user computer

170 through the data port 310 to the power supply 350, thus charging the power supply 350. Other alternative embodiments for the data port 310 include a fire wire port, blue tooth, Ethernet, or wireless fidelity (WiFi).

In an alternative embodiment of the removable electronic device 300 the electronic display is a monochrome LCD screen. Other alternatives include a color LCD screen, a plasma screen or a CRT display.

In another alternative embodiment of the removable electronic device 300, the printer 330 is not electrically connected to the removable electronic device 300, but is configured to communicate wirelessly with the removable electronic device 300.

In another alternative, printable medium printed on by the printer 330 is plain paper. Other alternatives for printable media include polymer sheet, label paper, and velum.

Figure 4 illustrates a top and side view of a removable electronic device 400. The removable electronic device 400 includes a data port 410, a navigation input mechanism 420, an electronic display 440, a removable electronic device housing 470, and an attachable printer module 430. The removable electronic device housing 470 includes a first end and a second end. The attachable printer module 430 includes a printer module data connection 450, and a printer module housing 480. The printer module housing 480 includes a first and second end, as well as a printer output aperture 460.

In the removable electronic device 400, the data port 410 is attached to the first end of the housing 470. The navigation input mechanism 420 is mechanically connected to the housing 470. The data connection receiver 490 is mechanically coupled to the second end of the removable electronic device housing 470. The electronic display 440 is attached to the surface of the housing 470.

The printer module data connection 450 is attached to the first end of the attachable printer module housing 480. The first end of the attachable printer module 430 is detachably fixed to the second end of the housing 470. When the attachable printer module 430 is detachably fixed to the removable electronic device housing 470, the printer module data connection contacts the data connection receiver 490 which electrically connects the data connection receiver 490 and the printer module data connection 450.

In operation, the data port 410 mechanically and electrically connects the removable electronic device 400 to the user computer 170 of Figure 1. The data port 400 configured to transfer data from the user computer 170 of Figure 1 to the removable electronic device 400. The data port 400 also provides data to the attachable printer module 430 as described in Figure 3. + electrical power?

The navigation input mechanism 420 operates by rotating around a central axis and is configured to be pressed inward toward the center of the removable electronic device housing 470. When the navigation input mechanism 420 is rotated or pressed inward it sends a signal to the electronic signal processor 370 of Figure 3. OK to call it a trackwheel & point out that it is similar to the trackwheel on the BB

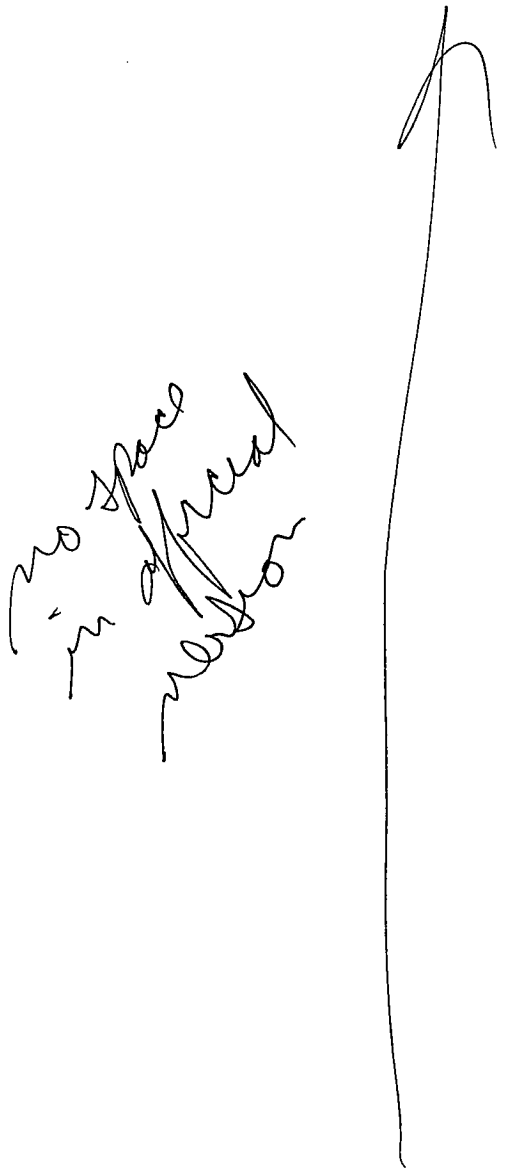
In operation, the electronic display 440 is configured to display text or graphics visible to the user. When the electronic display 440 receives a signal from the electronic signal processor 370 of Figure 3 to display data, the data is displayed in the form of text or graphics on the electronic display 440. Once the data is displayed on the electronic display 440, the user may manipulate the displayed text or graphics by rotating and depressing the navigation input mechanism 420. as further described below PWRT FIG 6

manipulate vs. view select + ?

User can choose, but not change the text

In an alternative embodiment of the removable electronic device 400 the attachable printer module 430 is permanently attached to the second end of the removable electronic device housing 470.

Several alternative embodiments of the removable electronic device 400 include a touch screen, a depressible dial mounted on the surface of the housing 470, and a plurality of depressible or non-depressing touch sensitive buttons.



NO - it is a series of screen shots of the LCD screen

Figure 5 illustrates a flow chart of a removable electronic device 500. First, at step 510 the removable electronic device interface 500 displays a list of words representing a coupon data unit. In step 510, the words ALPO, PURINA, AND ZAGNUT are displayed. The user selects from the displayed words using the navigation input mechanism 320 of Figure 3. The navigation input mechanism 320 of Figure 3 moves a selection cursor, displayed as a set of brackets in step 510, to the desired word. In step 510, the user has moved the selection cursor to the word PURINA.

What about power meter?

You have not resolved the CDU vs portion of CDU issue

Next, in step 520 the user selects the desired word using the navigation input mechanism 320 of Figure 3, and a list of data associated with that word are displayed on the display. Because the user has selected the word PURINA, ~~information related to a Purina coupon~~ is displayed including the brand name "PURINA," the coupon dollar valuation "$0.15 OFF," and product size "12 OZ. CAN." In addition to the information related to the Purina coupon, the screen also displays three options, "DISPLAY," "PRINT," and "EXIT," however, if the attachable printer module 430 Figure 4 is not attached to the removable electronic device housing 470 of Figure 4 the print option will not be displayed. As in step 510, the user moves the selection cursor to the desired option; in this case the desired option is "DISPLAY."

In the final step 530, the user selects the desired option using the navigation input mechanism 320 of Figure 3. In step 530, the user has selected "DISPLAY," and the screen displays a barcode associated with the Purina coupon. The user may now present the displayed bar code for redemption of the Purina coupon at a retail store employing optical barcode readers. If the user had selected the "PRINT" option, the printer 330 of Figure 3 would print the coupon bar code associated with the Purina coupon and the user could use the printed bar code to redeem

That is, the barcode may be directly scanned by a barcode reader from the screen. The ~~coupon~~ discount embodied by the coupon is then immediately applied to the goods being purchased by the user

the coupon at a retail store employing optical barcode readers. If the user had selected the "EXIT" option, the removable electronic device interface would return to step 510.

In an alternative embodiment of the removable electronic device interface the screen displays graphics representing coupon data units instead of words.

Figure 6 illustrates a flow chart 600 for the process of associating a search term with a coupon data unit. First, at step 610 an entity uploads a coupon data unit to the coupon data unit storage memory 120 of Figure 1 through the entity service 110 of Figure 1.

Next, in step 620, an entity selects a search term from the search term database stored in auction server 130 of Figure 1. If the entity does not wish to use any of the search terms contained in the search term database, the entity may nominate a new search term. This new search term is then stored in the search term database in auction server 130 of Figure 1.

Next, in step 630, the search term is associated with the entity's uploaded coupon data unit.

Figure 7 illustrates a flow chart 700 for the process of searching for a coupon data unit using a search term. First, at step 710, a user enters a search term in a search field of a website displayed on the screen of the user computer 170 of Figure 1.

Next, at step 720, the user computer 170 of Figure 1 sends a signal to the web server/application platform 150, which then inputs the search term into the search engine 140 of Figure 1.

Next, at step 730, the search engine 140 of Figure 1 then searches the search term database for entered search term.

Next, at step 735 the search engine determines whether the search term was found in the search term database. If the search term was found the process proceeds to step 760. If the search term was not found the process proceeds to step 740.

Next, at step 740 the search engine 140 of Figure 1 determines the search term was not found.

Next, at step 750 the search engine 140 of Figure 1 determines which search terms are most relevant to the entered search term. This determination may be made by comparing the entered search term to the search terms contained in the search term database based on factors including: search term spelling and data contained in the coupon data unit including the coupon incentive value in dollar or percentage form, the product associated with the coupon incentive, the brand of the product associated with the coupon incentive, the expiration date of the coupon incentive, geographical restrictions on the coupon incentive, restrictions on usage of the coupon incentive, or a bar code associated with the coupon incentive.

Next, at step 755 the search engine 140 of Figure 1 returns the coupon data units associated with the search terms determined to be the most relevant in step 750.

Next, at step 760 the search engine 140 of Figure 1 determines the search term was found.

Next, at step 765 the search engine 140 of Figure 1 finds the coupon data unit associated with the entered search term.

Next, at step 770, the search engine 140 of Figure 1 returns the coupon data unit associated with the entered search term.

Figure 8 illustrates a flow chart 800 for the process of linking a search term with an entity's coupon data unit through an auction. First, at step 810 a first coupon data unit is established and is stored in the coupon data unit storage memory 120 of Figure 1.

Next, at step 815, a second coupon data unit is established and is stored in the coupon data unit storage memory 120 of Figure 1.

Next, at step 820, the first coupon data unit is associated with a first entity.

Next, at step 825, the second coupon data unit is associated with a second entity.

Next, at step 830, a search term is identified. The search term may either be selected from search terms stored in a search term database, or may be nominated by an entity.

Next, at step 840 the first entity is allowed to submit a first monetary bid to associate a search term with the first entity's coupon data unit.

Next, at step 850, the second entity is allowed to submit a second monetary bid to associate a search term with the second entity's coupon data unit.

Next, at step 860 the auction server 130 of Figure 1 determines the greater of the first monetary bid and the second monetary bid.

Next, at step 870 the auction server 130 of Figure 1 associates the search term with the entity submitting the greater of the first monetary bid and the second monetary bid as determined in step 860.

While particular elements, embodiments, and applications of the present invention have been shown and described, it is understood that the invention is not limited thereto because modifications may be made by those skilled in the art, particularly in light of the foregoing teaching. It is therefore contemplated by the appended claims to cover such modifications and incorporate those features which come within the spirit and scope of the invention.

#81998

What is claimed is:

1. A method of associating a coupon data unit with a search term, said method including:

uploading a coupon data unit to a coupon data unit storage database, wherein said coupon data unit includes a bar code;

selecting a search term from search term database; and

associating said search term with said uploaded coupon data unit.

indent elements

Hmm. Interesting
- do I have a firm definition of CDU in your spec?
- close to google ~~ap~~ except for the "selector" maybe

2. A coupon redemption system including:

a coupon data unit storage memory adapted to store a plurality of coupon data units, each coupon data unit including a bar code, wherein said coupon data unit storage memory is configured to communicate ~~bilaterally~~ DO BIDIRECTIONALLY with a web server and a search engine, and provide a coupon data unit including a bar code to said search engine and said web server;

a web server configured to communicate bilaterally with said coupon data unit storage memory, said search engine, and a user computer; wherein said web server provides said coupon data unit including a bar code to said user computer.

a user computer configured to communicate bilaterally with said web server and a removable separately powered electronic device, wherein said web server provides said coupon data unit including a bar code to said user computer and said user computer provides said coupon data unit to said removable separately powered electronic device;

a removable separately powered electronic device adapted to detachably connect to said user computer, wherein said removable self powered electronic device is configured to receive and store said coupon data unit including a bar code sent by said user computer and display said bar code of said coupon data unit. – Pretty solid claim.
– Can we maybe broaden a little?

DO formal claim #ing

2.1 The system of claim 2, wherein said bar code of said coupon data unit displayed on said removable self powered electronic device represents a coupon incentive capable of being redeemed at a retail store .

2.2 The system of claim 2, wherein the removable self powered electronic device is configured to communicate wirelessly with said user computer.

2.3 The system of claim 2, wherein said removable self powered electronic device include a printer.

2.4 The system of claim 2.3 wherein said printer configured to print said bar code of said coupon data unit stored on said removable self powered electronic device, wherein said bar code represents a coupon incentive capable of being redeemed at a retail store.

2.5 The system of claim 2, wherein said removable self powered electrical device includes a a power management program stored on a memory, wherein said power management program reduces power output when said electronic device does not receive an input from a user.

2.6 The system of claim 2, wherein said web interface is configured to communicate with a BlackBerry utilizing software configured to receive and store said coupon data unit including a bar code provided by said web interface, and display said bar code of said coupon data unit representing a coupon incentive capable of being redeemed at a retail store.

2.7 The system of claim 2, wherein said web interface is configured to communicate with a smart phone utilizing software configured to receive and store said coupon data unit including a bar code provided by said web interface, and display said bar code of said coupon data unit representing a coupon incentive capable of being redeemed at a retail store.

2.8 The system of claim 2, wherein said web interface is configured to communicate with a web enabled cell phone utilizing software configured to receive and store said coupon data unit including a bar code provided by said web interface, and display said bar code of said coupon data unit representing a coupon incentive capable of being redeemed at a retail store.

3. A method of displaying a coupon data unit associated with a search term, said method including:

entering a first search term in a web interface search field, wherein said first search term is adapted to search a database containing a plurality of search terms associated with a plurality of coupon data units;

inputting said first search term into a search engine;

searching said search term database for said first search term using said search engine;

returning a coupon data unit associated with said first search term if said first search term is found is said search term database;

determining a second search term relevant to said first search term if said first search term is not found in said search term database;

returning a coupon data unit associated with said second search term determined to be relevant to said first search term.

4. A method of associating a search term and a coupon data associated with an entity, said method comprising:

establishing a first coupon data unit including a first coupon bar code, wherein said first coupon data unit is associated with a first entity;

establishing a second coupon data unit including a second coupon bar code, wherein said second coupon data unit is associated with a second entity;

identifying a search term, wherein said search term is used to search a database containing a plurality of coupon data units, wherein said database includes said first coupon data unit and said second coupon data unit.

allowing said first entity to establish a first monetary bid to associate said first coupon data unit with said search term;

allowing said second entity to establish a second monetary bid to associate said second coupon data unit with said search term;

determining the greater of the first monetary bid and the second monetary bid; and

associating said search term with the coupon data unit associated with the entity establishing the greater of the first monetary bid and the second monetary bid.

4.1 The method of claim 4, wherein said search term is nominated by an entity.

4.2 The method of claim 4, wherein said search term associated with said coupon data unit associated with the entity establishing the greater of said first monetary bid and said second monetary bid, is limited to a specific geographic location.

4.3 The method of claim 4.2, wherein said specific geographic location is a postal code.

4.4 The method of claim 4.2, wherein said specific geographic location is a city

4.5 The method of claim 4.2, wherein said specific geographic location is a county

4.6 The method of claim 4.2, wherein said specific geographic location is a state.

4.7 The method of claim 4.2, wherein said specific geographic location is a country.

4.8 The method of claim 4.2, said method further including:

Displaying the coupon data unit on a display of a user computer when said search term associated with said coupon data unit is entered into the search field of a web interface being accessed by said user computer.

4.9 The method of claim 4, said method further including:

disassociating said search term and said coupon data one month after said search term is initially associated with said coupon data unit.

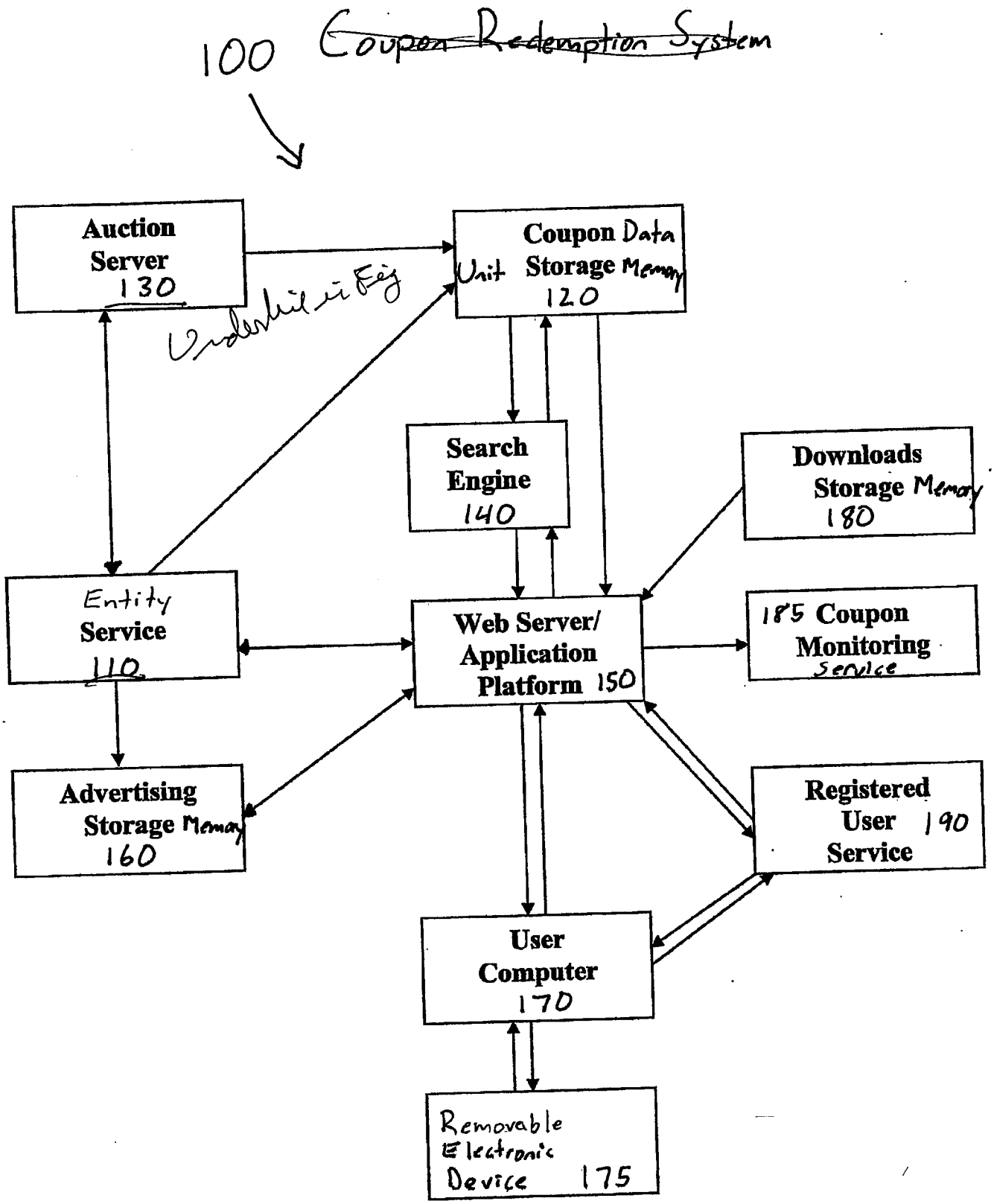

100
Coupon Redemption System
Auction Server 130
Coupon Data Unit Storage Memory 120
Search Engine 140
Downloads Storage Memory 180
Entity Service 110
Web Server/ Application Platform 150
185 Coupon Monitoring Service
Advertising Storage Memory 160
Registered User 190 Service
User Computer 170
Removable Electronic Device 175

Fig. 1

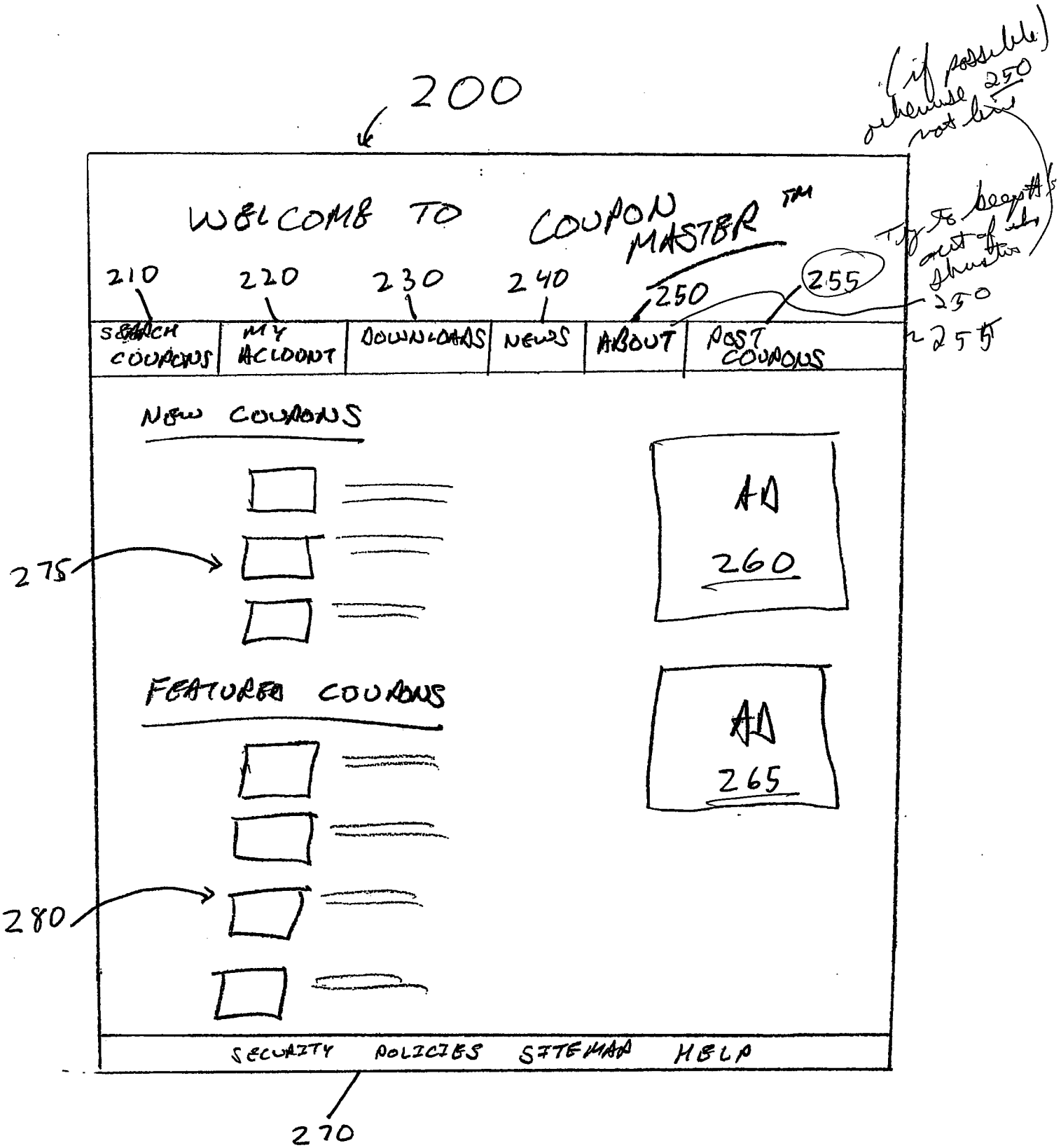
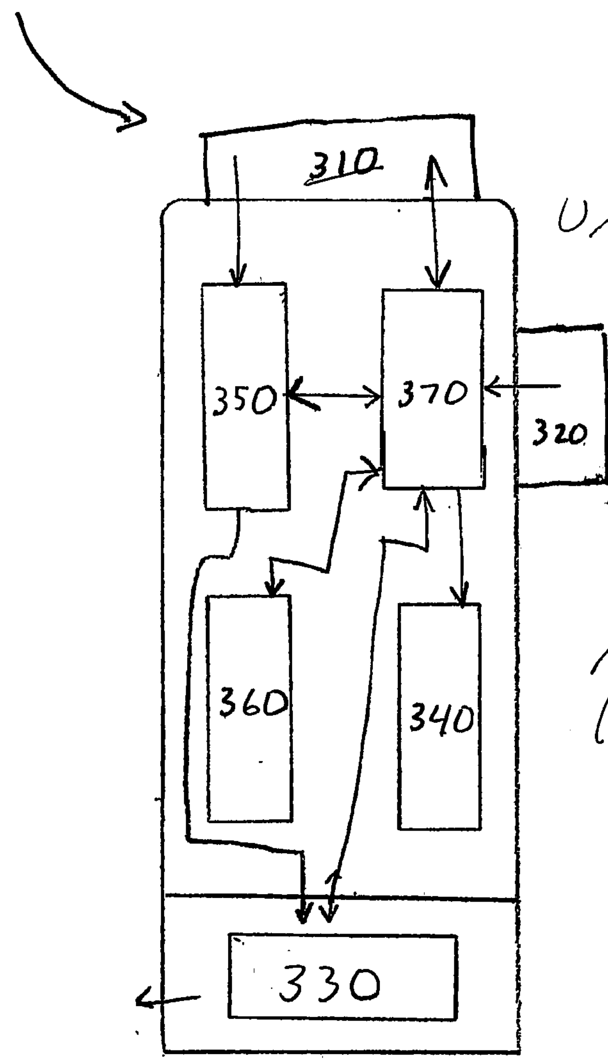

200
WELCOME TO COUPON MASTER™
210
220
230
240
250
255
SEARCH COUPONS
MY ACCOUNT
DOWNLOADS
NEWS
ABOUT
POST COUPONS
NEW COUPONS
AD
260
275
FEATURED COUPONS
AD
265
280
SECURITY
POLICIES
SITEMAP
HELP
270

Fig. 2

300 - ~~Removable electrical~~ device



Underline in Fig

~~BETTER~~ ~~OK~~ to keep names of elements (although you can improve them like in Fig 1)

Fig. 3

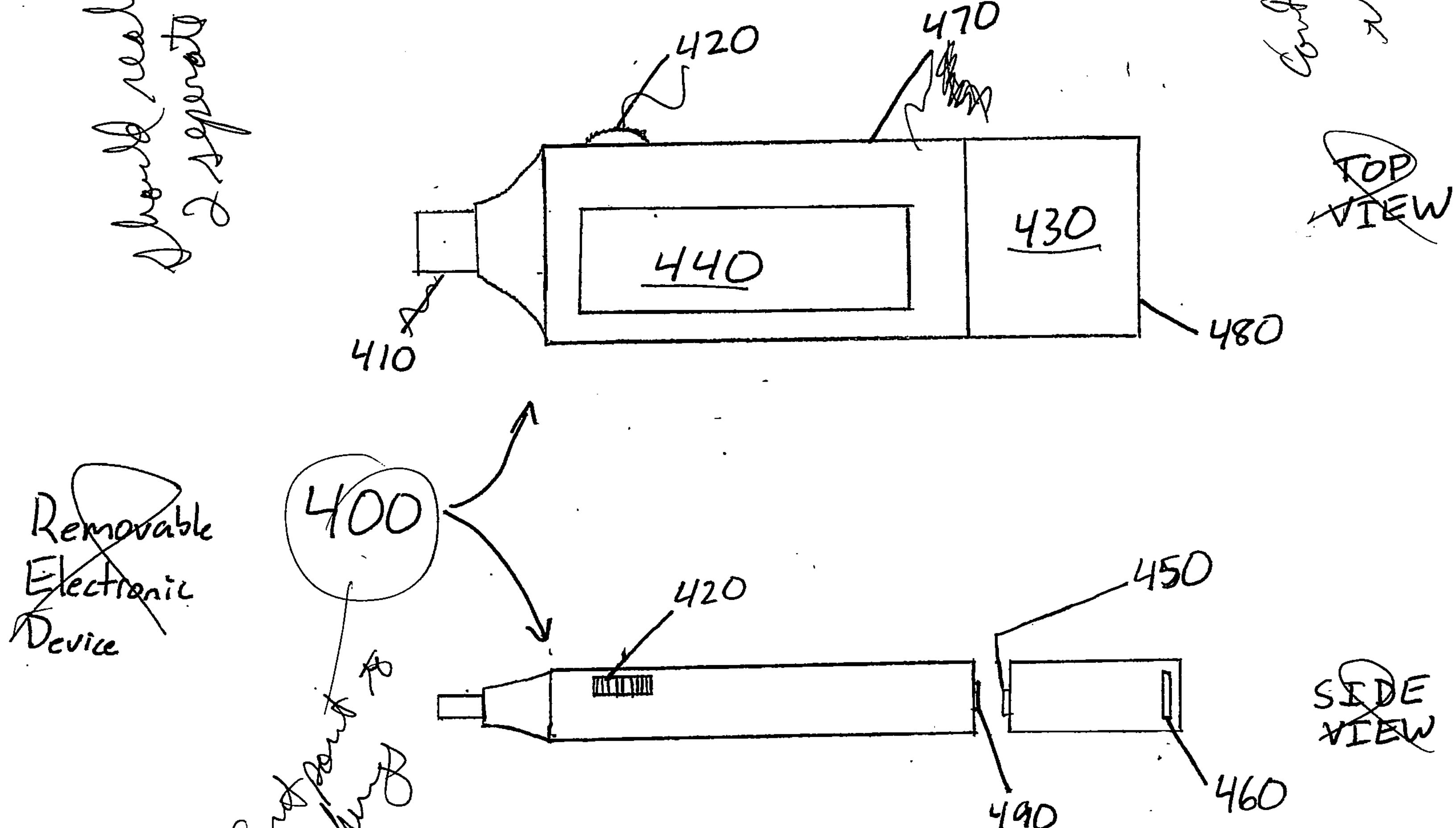
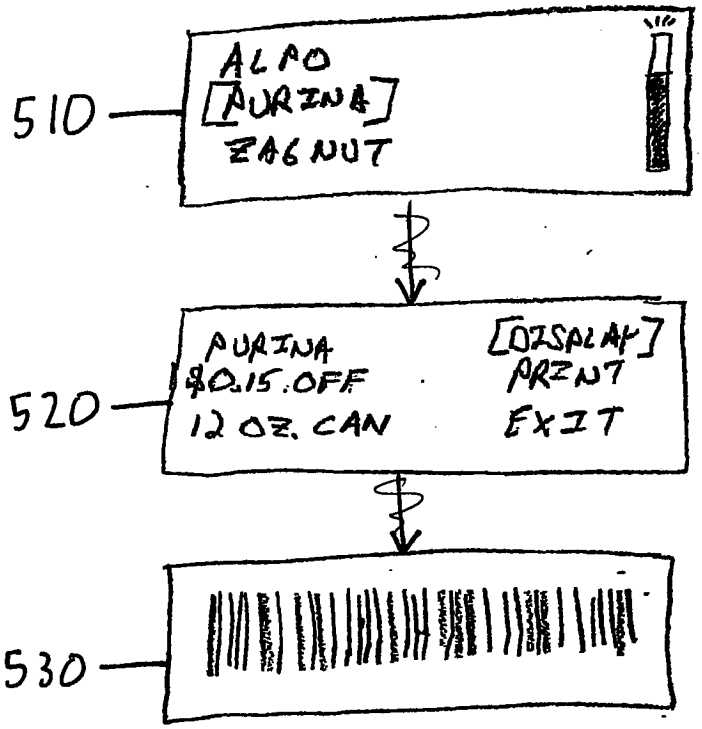

410
420
470
440
430
480
TOP VIEW
Removable Electronic Device
400
420
450
490
460
SIDE VIEW

Fig. 4



- should be 3 separate figures according to PTO rules
- series of screenshots, not flowchart, although you could draft a flowchart to accompany it if so desired

Fig. 5

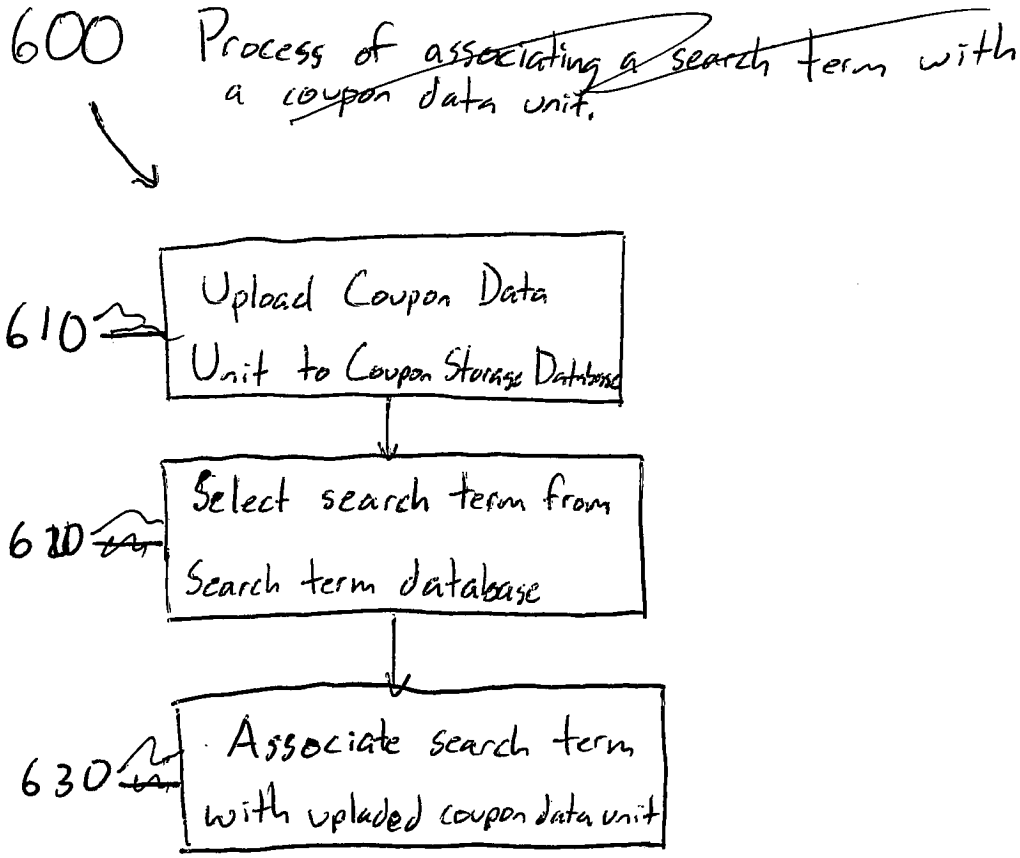

600
Process of associating a search term with a coupon data unit.
610
Upload Coupon Data Unit to Coupon Storage Database
620
Select search term from Search term database
630
Associate search term with uploaded coupon data unit

Fig. 6

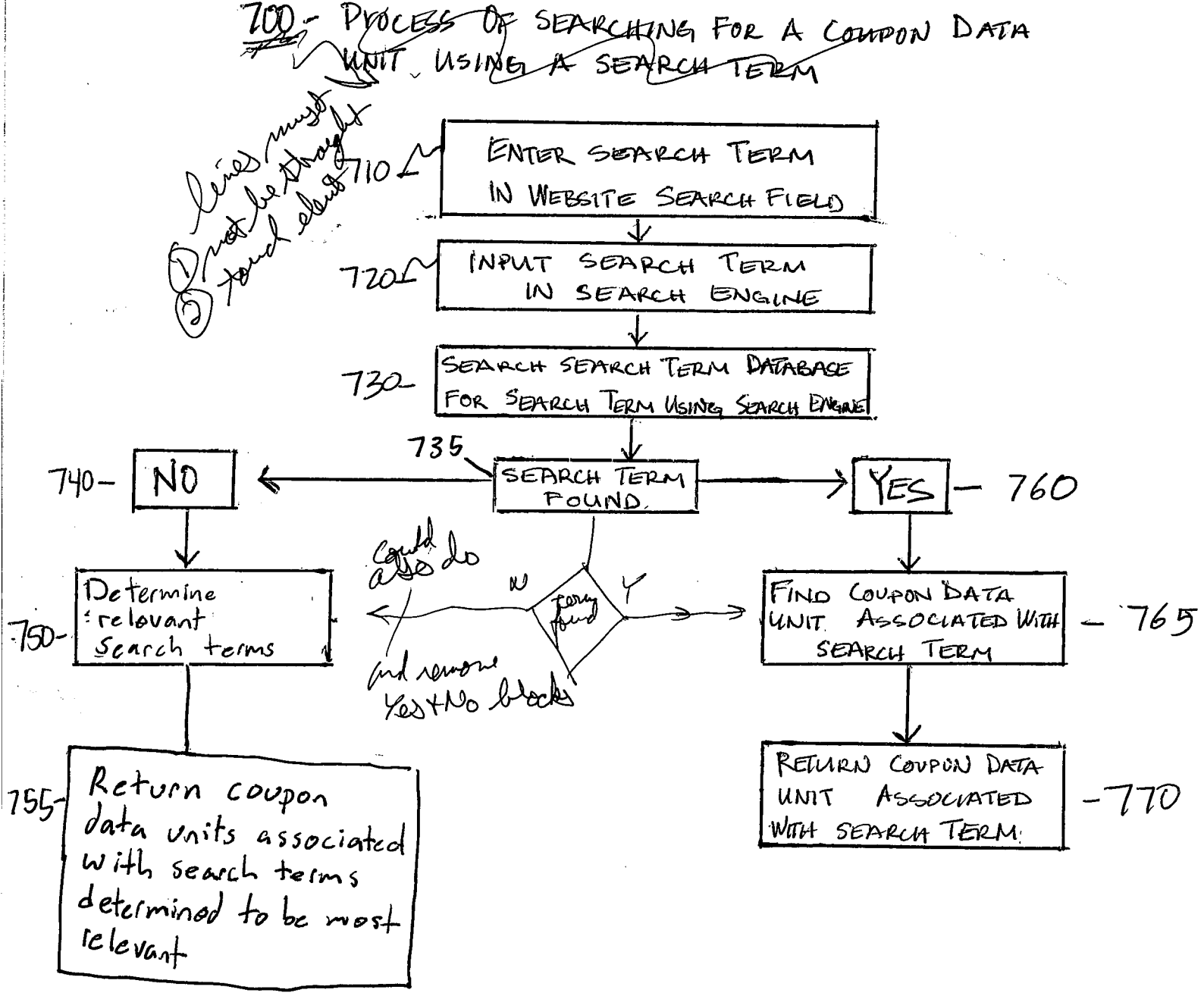

700 - PROCESS OF SEARCHING FOR A COUPON DATA UNIT USING A SEARCH TERM
lines must be straight and closed
710
ENTER SEARCH TERM IN WEBSITE SEARCH FIELD
720
INPUT SEARCH TERM IN SEARCH ENGINE
730
SEARCH SEARCH TERM DATABASE FOR SEARCH TERM USING SEARCH ENGINE
735
SEARCH TERM FOUND
740
NO
760
YES
could also do
N
term found
Y
and remove Yes+No blocks
750
Determine relevant search terms
765
FIND COUPON DATA UNIT ASSOCIATED WITH SEARCH TERM
755
Return coupon data units associated with search terms determined to be most relevant
770
RETURN COUPON DATA UNIT ASSOCIATED WITH SEARCH TERM

Fig. 7

800 - LINKING A SEARCH TERM WITH AN ENTITIES COUPON DATA UNIT THROUGH AN AUCTION

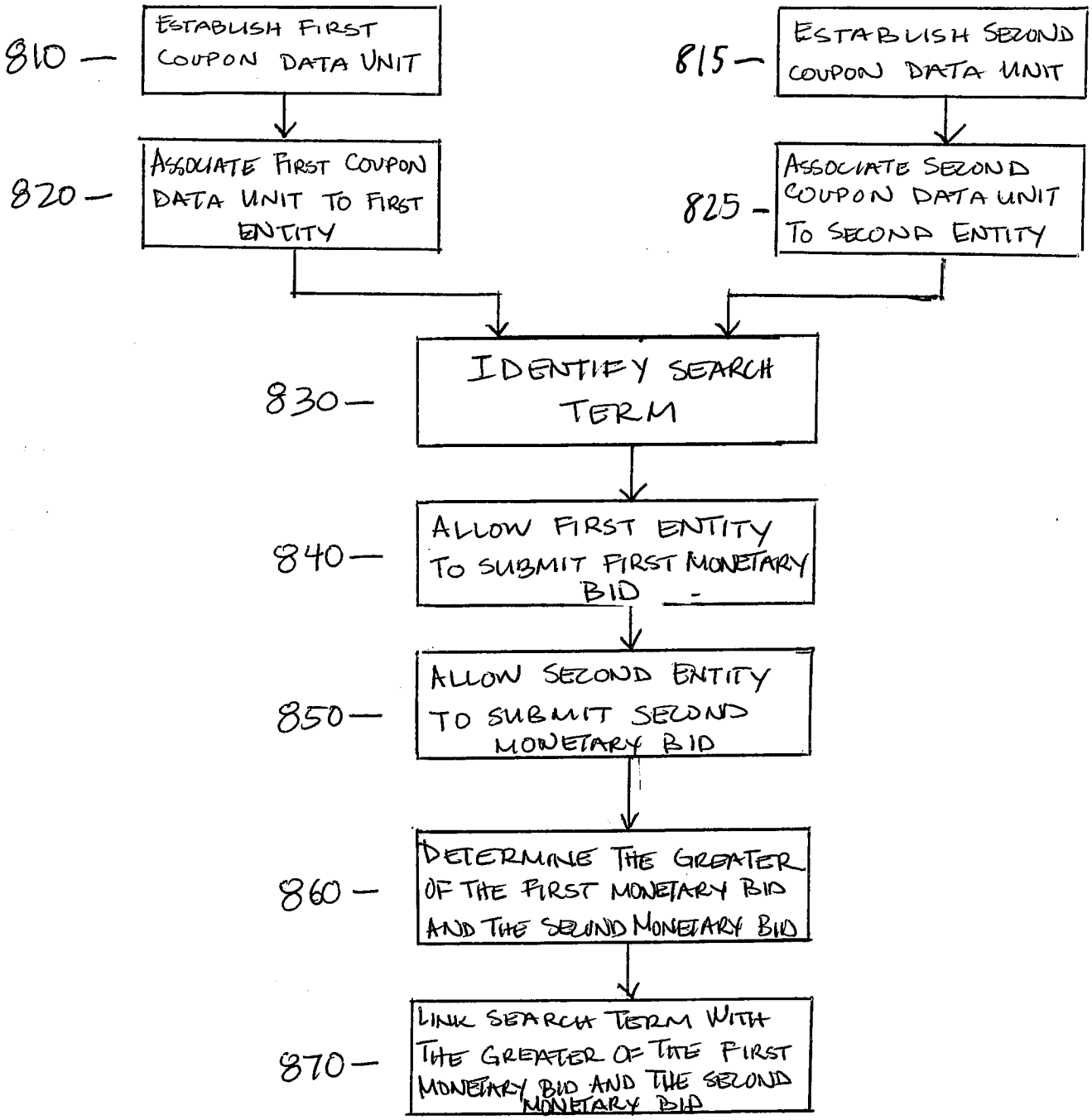


FIG. 8