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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

ACIONE
NALIJ

Trámite : 011 Evento : 349 Actuación : 444

Referencia : Expediente No. 04.040.460
Asunto : Solicitud de Patente para **CONTROLADOR DE BOMBA
DE COMBUSTIBLE**
Solicitante : **GIACAMAN, MIGUEL S.**
Clase : B67D 005/026, G06F 017/060, G07F 013/002
Fecha de Solicitud : 3 de mayo de 2004

1. Yo, Emilio FERRERO, obrando como apoderado del solicitante en el asunto antes identificado, me refiero al Oficio No. No. **11672** notificado por fijación en lista del 21 de septiembre de 2007.

2. Mediante mi memorial de fecha 17 de diciembre de 2007 solicité un plazo de 30 días para atender el Oficio No. **11672**.

3. Mediante el Oficio No. **11672** se puso en conocimiento del solicitante el informe que contiene las observaciones hechas por su Despacho sobre la presente solicitud de patente.

Atiendo a las observaciones de la manera siguiente:

3.1. CLARIDAD DE LA SOLICITUD

Respetuosamente ponemos de presente que tanto la descripción como el pliego reivindicatorio de la presente solicitud si son claros.

Lo anterior, por cuanto la primera revela en las páginas 5 a 10 la mejor manera de ejecutar la invención y en el segundo, las reivindicaciones independientes del controlador de bomba combustible, del método, y el sistema contienen todas las características esenciales de la invención, es decir cada uno de los elementos o etapas, respectivamente, que conforman dicha invención. Adicionalmente, las reivindicaciones dependientes se han redactado de tal forma que especifican y delimitan características particulares del controlador, del sistema y del método reivindicado en las reivindicaciones independientes.

Con respecto a que las reivindicaciones dependientes incluyen materia nueva frente a lo revelado en la reivindicación independiente respetuosamente ponemos que lo mismo no se encuentra prohibido por la ley y por el contrario, el mismo Manual Andino de Patentes lo prevé como una posibilidad siempre y cuando efectivamente se refieran a un elemento o a una etapa de una reivindicación principal (ver Manual Andino de Patentes página 37 numeral 4.5.2).

Por lo tanto, el capítulo reivindicatorio es claro, ya que dicho pliego reivindica unos productos y un procedimiento por sus características estructurales o de función y permite determinar el alcance de la protección reivindicada y compararla frente al estado del arte, de acuerdo con las disposiciones del artículo 30 de la Decisión 486.

Finalmente, en respuesta a la solicitud del Señor Examinador, presentamos los dibujos de la presente solicitud debidamente traducidos a Español.

3.2. NO CUMPLIMIENTO DE LOS REQUISITOS DE PATENTABILIDAD

3.2.1. Con relación a las objeciones que ese Despacho hizo a la redacción de las reivindicaciones porque las mismas caracterizaban el sistema/controlador y el método por la combinación de características estructurales y funcionales, nos permitimos señalar que dichas reivindicaciones son claras y están correctamente redactadas, pues no existe provisión legal alguna en la cual se señale que la redacción bajo la cual se presentan se

encuentra prohibida. En el evento que sea así, respetuosamente solicitamos al Señor Examinador señalar dicha norma.

3.2.2. Con relación a las objeciones que ese Despacho hizo a la redacción de las reivindicaciones de procedimiento/método porque no revelan una secuencia de etapas que permitan la fabricación de un producto, nos permitimos señalar lo siguiente:

Respetuosamente ponemos de presente que no estamos de acuerdo con la objeción del Examinador según la cual los métodos objeto de la presente solicitud de patente no se tendrán en cuenta, toda vez que los mismos no consisten en una secuencia de etapas conducentes a la fabricación de un producto.

A este respecto, el artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece:

"Art. 14. Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento, en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial".

De la lectura de esta norma queda claro que la materia que el legislador comunitario ha considerado como patentable son productos y procesos, siempre y cuando cumplan los requisitos de novedad, nivel inventivo y aplicación industrial.

A partir del texto de esta norma sería claro para cualquier persona encargada de aplicarla a un caso concreto que la misma no consagra ningún requisito adicional que deban cumplir los productos para ser patentables y que por ende no le es posible formular una objeción a este respecto con fundamento en esta norma jurídica.

Adicionalmente, queremos poner de presente que NO existe norma jurídica alguna en todo el texto de la Decisión 486 que establezca la necesidad de que los procesos/métodos

consistan en una secuencia de etapas conducentes a la fabricación de un producto o a *contrario sensu* que si no conducen a la producción de un producto tangible no son patentables.

3.2.3. De otro lado, consideramos que la excepción de patentabilidad consagrada en el artículo 21 de la Decisión 486 no esta referida al segundo uso de elementos convencionales sino **al segundo uso de productos que han sido objeto de patente con anterioridad**, de acuerdo con el claro tenor literal de estas normas. Veamos:

"Art. 21. Los productos o procedimientos ya patentados, comprendidos en el estado de la técnica, de conformidad con el artículo 16 de la presente Decisión, **no serán objeto de nueva patente, por el simple hecho de atribuirse un uso distinto al originalmente comprendido por la patente inicial**".(subrayado fuera del texto)

A este respecto, respetuosamente consideramos que el criterio patentabilidad de segundos usos consagrados en estas normas, como excepción de patentabilidad, NO resulta aplicables al presente caso. Veamos:

Respetuosamente ponemos de presente que No es posible estar de acuerdo con tal afirmación, ya que el artículo 21 de la Decisión 486, que dicho sea de paso consagra una excepción de patentabilidad y que por ende debe ser aplicada de manera restrictiva, no hace referencia a los segundos usos de cualquier producto y procedimiento sino solo de aquellos que se encuentren **ya patentados**.

En el presente caso, no se demostró que la invención reivindicada en el nuevo pliego reivindicatorio, entendida como un todo, se encuentra patentada o que en algún momento fue objeto de una patente, por lo que no puede aplicarse de ninguna manera la excepción de patentabilidad del artículo 21 a la presente invención.

Por lo tanto, le solicito se sirva continuar con el trámite de la presente solicitud pues ésta se presenta de una forma clara y una persona versada en la materia podría obtener el producto objeto de esta invención con la información presentada en la descripción y reivindicaciones.

4. Puesto que se han atendido a cabalidad las observaciones hechas por su Despacho sobre la presente solicitud de patente, atentamente solicito que se continúe su tramitación.

Señora Jefe,



EMILIO FERRERO

T.P.A. No. 31.929

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No. M-2008-117946\NNJ



US005895457A

United States Patent [19]

Kurowski et al.

[11] Patent Number: **5,895,457**[45] Date of Patent: **Apr. 20, 1999**[54] **AUTOMATED FILLING STATION WITH
CHANGE DISPENSER**[75] Inventors: **Michael Kurowski, Littleton; Thomas
P. Bruskotter; Edward M. Swapp,**
both of Englewood, all of Colo.[73] Assignee: **Gary-Williams Energy Corporation,**
Denver, Colo.[21] Appl. No.: **08/946,304**[22] Filed: **Oct. 7, 1997****Related U.S. Application Data**[63] Continuation-in-part of application No. 08/868,247, Jun. 3,
1997, abandoned.[51] Int. Cl.⁶ **G06F 17/60**[52] U.S. Cl. **705/413; 194/206; 194/210;
222/14; 222/23; 235/381; 364/479.02; 364/479.11;
705/16**[58] Field of Search **194/200, 206,
194/210, 211, 212; 221/21; 235/381; 222/14,
23; 364/479.01, 479.02, 479.11, 479.12,
479.14; 705/1, 16, 17, 22, 413**[56] **References Cited****U.S. PATENT DOCUMENTS**

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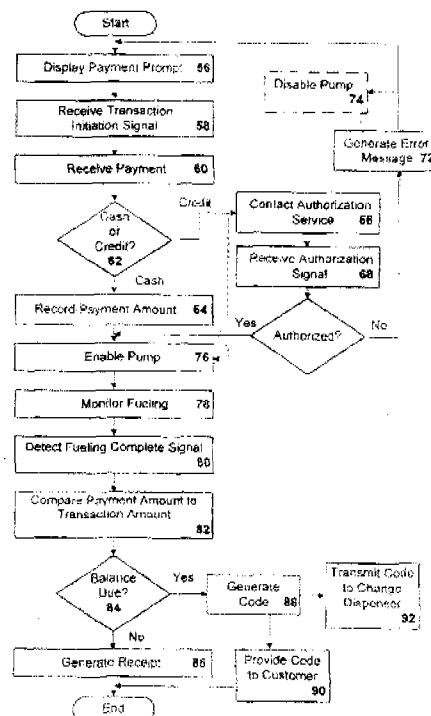
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OTHER PUBLICATIONSi Series Drive-Up Solutions, product literature by Diebold,
Incorporated, 1995.*Primary Examiner*—Edward R. Cosimano*Attorney, Agent, or Firm*—Holme Roberts & Owen LLP[57] **ABSTRACT**

The automated filling station system of the present invention allows customers to obtain change in currency at the time of purchase, thereby accommodating cash customers as well as credit customers, and one-time customers as well as returning customers. In one embodiment, the system is implemented as a network (10) of filling stations (16) that report to a remote host computer (12). Each filling station (16) has a number of fuel pump systems (22) and a change dispenser system (24). Upon completion of a fueling transaction, a code is provided to a customer at a fuel pump system (22). The customer can enter the code to receive cash at the change dispenser (24) or can use the code for credit towards a subsequent fuel purchase within the network (10).

20 Claims, 5 Drawing Sheets

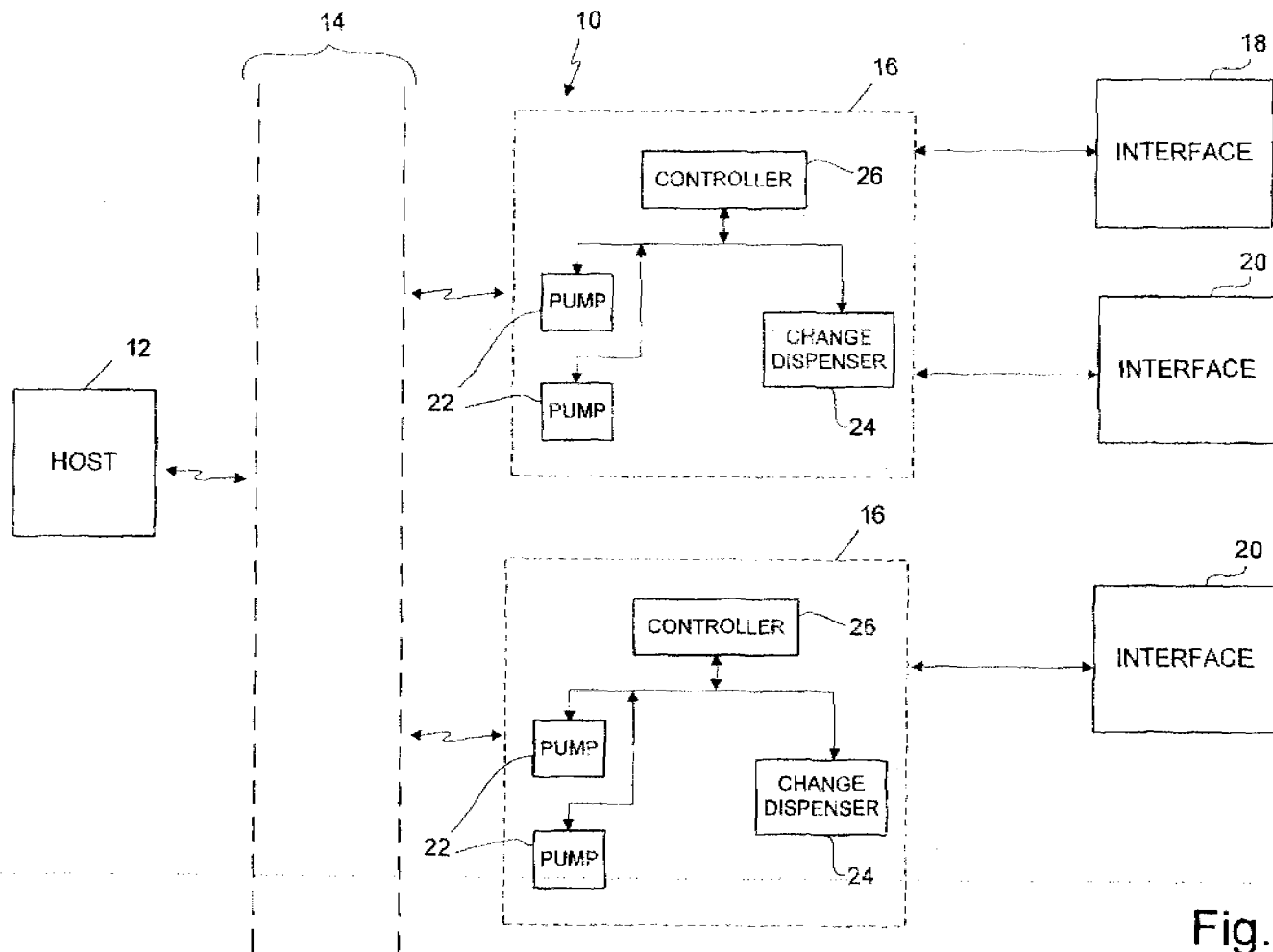


Fig. 1

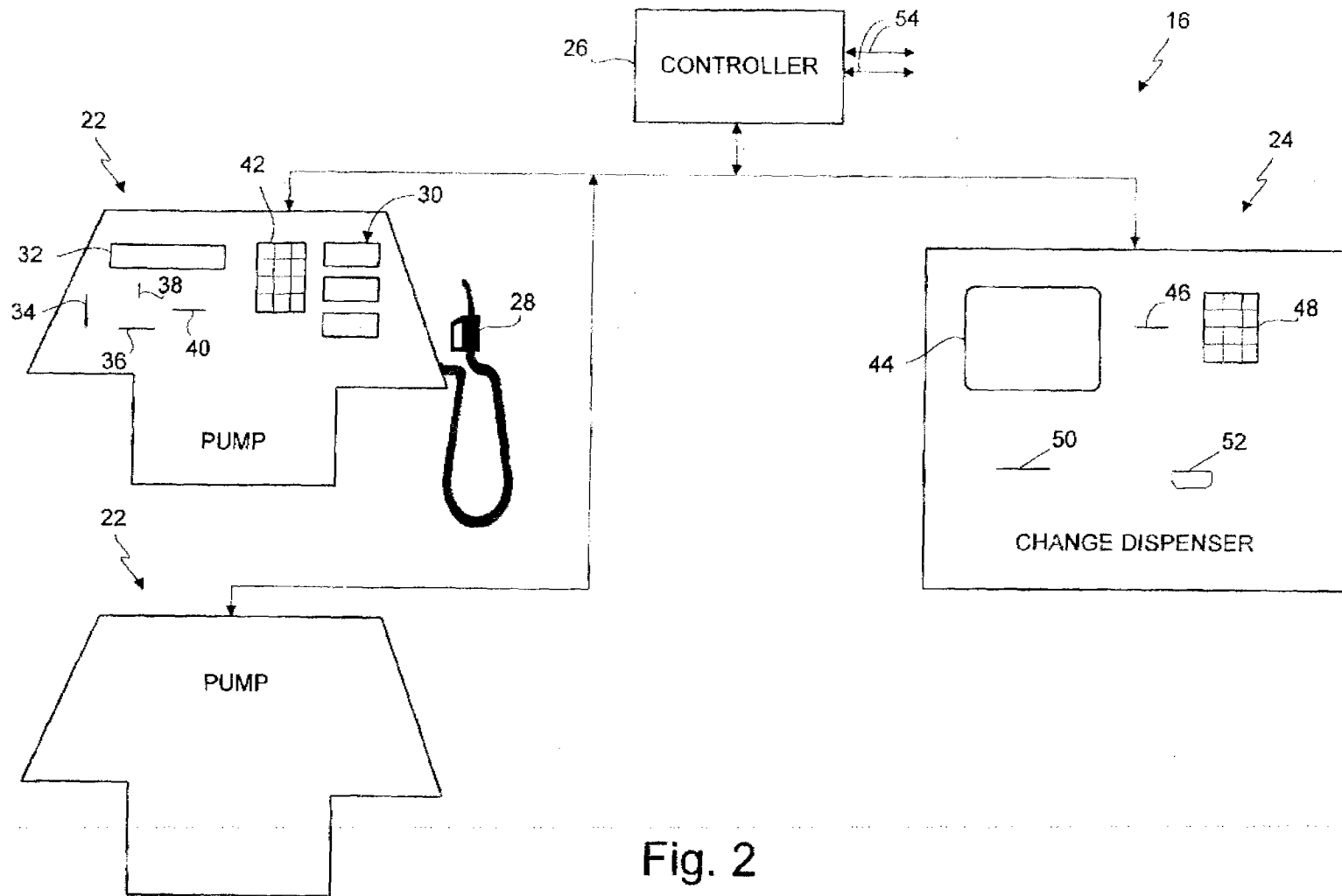


Fig. 2

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AUTOMATED FILLING STATION WITH CHANGE DISPENSER

This application is a continuation-in-part of United States patent application Ser. No. 08/868,247 filed on Jun. 3, 1997 now abandoned.

FIELD OF THE INVENTION

The present invention relates in general to the operation of filling stations, i.e., retail outlets for the sale of gasoline, diesel or other fuel. In particular, the present invention relates to a method and apparatus for automating operation of a filling station that facilitates payment in forms including cash payment.

BACKGROUND OF THE INVENTION

Increasing automation of filling stations offers a number of potential advantages including customer convenience, reduced labor and risk to personnel, and lower prices. Customer convenience may be enhanced due to longer hours of operation, more service sites and reduced transaction times. In addition to the advantages of reduced personnel and working hours, automation of filling stations improves personnel safety by reducing cash handling. Reduced operating costs also benefit consumers through lower prices. For all of these reasons, the industry has long sought ways to increase filling station automation.

One form of automation that has gained widespread acceptance is the ability to pay at the pump using credit or debit cards. Typically, a card reader and a monitor are provided at the pump. The monitor prompts the customer to initiate a transaction by inserting a card into the card reader. Upon reading the card, the pump system accesses a card approval service, e.g., the BUYPASS. Upon reading the card, the pump system accesses a card approval service, e.g., the BUYPASS authorization system, PAYPOINT authorization system or other credit card authorization network, in order to obtain card approval for a selected approval amount. The approval amount does not necessarily accurately reflect the subsequent fueling transaction amount. If approval is obtained, the pump system is enabled and the customer may proceed with fueling. Alternatively, where available, so-called smart card systems may allow for payment approval without accessing an external approval service.

Another type of system that is in limited use allows for cash payments. A difficulty associated with cash payments is that customers often desire to fill their tanks and therefore do not know the transaction amount ahead of time. Other customers may wish to receive change to have available for other reasons. One existing system addresses this problem by providing credit vouchers in the event that a balance remains upon completion of the fueling process. In this manner, the customer can pay in cash in an amount sufficient to cover a fill-up. When the fueling process is complete, the credit voucher system issues a voucher that is coded, e.g., with a six digit code, to indicate a balance owed to the customer as change. On a subsequent visit, the customer can enter the code into a keypad of the pump system to receive credit corresponding to the amount of the previously unused payment or balance.

Although existing systems have benefited the industry and some consumers and have achieved significant success with respect to certain segments of the market, the present invention addresses various needs that remain to be satisfied.

SUMMARY OF THE INVENTION

It has been recognized that existing automated filling station systems do not address the needs of a range of

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consumers. In this regard, credit card based pay-at-the-pump systems do not accommodate customers who do not have or do not wish to use credit cards. In addition, the increased transaction costs associated with credit cards are reflected in higher prices for credit card customers or all customers. Credit voucher systems may be convenient for returning customers but are unattractive to customers who are only transiently present in a service area (e.g., interstate traffic), and to customers who would prefer not to be responsible for keeping track of vouchers or who would otherwise prefer not to be limited to returning to the same vendor.

The present invention is directed to an automated filling station system that accommodates the needs of customers including cash customers by providing change in the form of currency. The system encompasses a process and corresponding structure involving, inter alia: providing a pump system for dispensing fuel including a payment processor for receiving payments from customers and controlling operation of the pump system in response to such payments; receiving a payment from a customer in a customer selected amount at the pump system; monitoring a fueling process by the customer to identify a completion of the process (e.g., returning the fuel nozzle to its hanger or turning the pump off) and determining an amount due associated with the fueling process; comparing the customer selected payment amount to the amount due to determine any balance due to the customer in connection with the fueling process; providing a change dispenser for dispensing change in the form of currency (e.g., bills and/or coins); and controlling operation of the change dispenser to provide change in currency to a customer based on the determined balance due to the customer. The pump system is preferably capable of receiving payment in various forms including credit and debit cards or the like, cash and previously issued tickets or credit vouchers (for the convenience of returning customers). The pump system may therefore include a magnetic or other card reader, bill and coin slots, and/or a credit voucher slot and will typically include at least a card reader and bill slot. The change dispenser, which may be provided at the pump or a separate location, preferably provides change in multiple denominations, e.g., some or all of United States ten dollar bills, five dollar bills, one dollar bills, quarters, dimes, nickels and pennies. A system is thus provided that accommodates cash customers as well as credit customers, and one-time customers as well as returning customers.

According to one aspect of the present invention, operation of the change dispenser is controlled based on code information. In particular, the automated filling station system includes logic (e.g., hardware, firmware and/or software) for generating transaction specific codes (e.g., numeric or alphanumeric) and associating particular codes with particular transactions to indicate a balance due in connection with the transaction. For example, upon receiving a "fueling complete" signal from a pump, the logic may obtain/retrieve the customer-selected payment amount and the transaction amount, compare these amounts to determine a balance due, generate a random or selected string of characters or password to serve as a code, create a file or the like in memory (e.g., computer memory, buffer storage and/or cache storage) relating the code to the determined balance due, and transmitting the coded balance information to, or otherwise making the coded balance information available to, the change dispenser. The logic is preferably embodied in software so as to allow on-site or remote access without hardware replacement or modification.

The balance code can be, for example, embedded in a machine readable ticket, displayed to the customer on a

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monitor or printed on a receipt. The change dispenser includes a code processor and a customer input device such as a ticket slot, keyboard or the like. The code processor receives a code from the customer via the customer input device, and the dispenser dispenses change to the customer based on the code and coded balance information stored in a database. This coded control of the change dispenser allows customers to choose between cashing in any balance due or saving the balance for application towards a subsequent fueling transaction, and also provides improved filling station configuration and servicing options.

According to another aspect of the present invention, a centralized change dispenser is associated or networked with multiple (two or more) pump systems via a control system. The control system generates coded balance information for particular transactions as described above and makes the coded balance information available to the change dispenser. The pump systems provide corresponding codes to customers who are due a balance. If change is desired, as opposed to credit towards a future transaction, the customer approaches the centralized change dispenser from any of the pump systems and enters the transaction-specific code. The change dispenser is able to dispense change to customers from each of the pump systems based on the coded balance information by virtue of the networked relationship. The filling station and its controller may be networked, in turn, with other filling stations and a remote host computer. In this manner, change machine servicing for an automated filling station is greatly simplified. In addition, reprogramming to change certain system parameters related to code validation and termination, cash machine related alarms, and the like is simplified.

The automated filling station system of the present invention thus accommodates cash customers as well as credit customers and one-time customers as well as returning customers, and thereby more fully realizes the potential benefits of automated filling stations. The invention also simplifies filling station servicing and remote access and control of automated filling stations.

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present invention and further advantages thereof, reference is now made to the following detailed description taken in conjunction with the drawings in which:

FIG. 1 is a schematic diagram of an automated filling station network in accordance with the present invention;

FIG. 2 is a schematic diagram showing the components at an individual filling station site of the network of FIG. 1;

FIG. 3 is a flow chart illustrating a pump system related process according to the present invention;

FIG. 4 is a flow chart illustrating a change dispenser system related process according to the present invention; and

FIG. 5 is a chart outlining various functions and implementation options of the network of FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, the invention is set forth in the context of a particular automated filling station environment. It will be appreciated that certain aspects of the present invention are applicable to other environments. The automated filling station implementation of the present invention can be a single site system or a network of filling

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stations, can be a stand-alone filling station or associated with a convenience store, supermarket, department store, discount store, etc., and can be manned or unmanned. Numerous other environmental factors can be varied as desired. For the sake of completeness, the illustrative embodiment of the invention described below is set forth in the context of a network of filling stations, some of which are associated with stores.

Referring to FIG. 1, an automated filling station network is generally identified by the reference numeral 10. Generally, the network 10 includes a number of filling station sites 16 that communicate with a remote host computer 12, via a public or private communications network 14, such as the Internet. Although the illustrated network 10 is shown as including only two filling station sites 16, it will be appreciated that any number of filling stations may be included in the network 10.

Each filling station site 16 includes a number of fuel pump systems 22, at least one change dispenser system 24, and a site controller 26. Again, although the illustrated filling station sites 16 are shown as including only two fuel pump systems 22, each site 16 can include any number of fuel pump systems 22. Similarly, although a single change dispenser 24 per site 16 is preferred for ease of maintenance, any number of change dispensers 24 per site 16 can be included as desired, and the change dispenser can be incorporated into the individual pump systems rather than provided separately as shown. The site controller 26 implements logic as will be described below. The logic can be embodied in hardware, firmware or software. Preferably, the logic is embodied in software so as to facilitate remote or onsite revisions and updates without changing or modifying hardware.

A number of interfaces are also shown at each filling station site 16. Such interfaces can include a store data system interface 18, and maintenance and restocking interfaces 20. The store data system interface 18 is particularly applicable where the filling station site 16 is associated with a convenience, discount or other store. The interface 18, which may be any suitable network connection, allows the store data system and the network data system to exchange data for inventory, accounting and other purposes. The maintenance and restocking interfaces 20, which may include a user interface device such as a keyboard and a scanner for reading identification cards, are provided for tracking refueling of the filling station site 16, restocking of the change dispenser 24, onsite administrative updates, and other purposes.

Additional details of a filling station site 16 are shown in FIG. 2. The illustrated pump system 22 can receive payment in a variety of forms including cash, credit or debit cards, and previously issued system credit, i.e., by way of a balance code entered on a keyboard or, optionally, a coded voucher. In this regard, the pump system 22 includes some or all of a card reader 34, such as a conventional magnetic card swiper, a bill acceptor 36, an optional coin acceptor 38, and an optional voucher reader 40. Typically, the pump system 22 will include at least a card swiper and a bill acceptor. The voucher reader 40, if provided, receives and processes vouchers containing machine readable code information. For example, the machine readable code information may be provided in the form of a bar code, magnetic coding or other machine readable format. The pump system also includes a message display 32 such a monochromatic dot matrix display system for displaying various messages such as instructions, prompts, advertisements, and error messages. A user input device such as a key pad 42 may be also provided

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for various user input functions such as (optionally) selecting payment type, entering a security or prior payment balance code, and approving payment amounts. The pump system 22 also includes conventional pump components such as a fuel dispenser nozzle 28 and a pump display 30 for displaying a running transaction amount, price information and fuel amount.

The illustrated change dispenser system 24 receives code information input by a customer, retrieves associated coded balance information from the site controller 26 and dispenses change in the form of bills and coins. The system 24 which may be, for example, a cash machine manufactured by Diebold, Inc. of Canton, Ohio, includes: a dispenser display 44 for displaying instructions, prompts, advertisements and the like; a user input device such as a key pad 48 for manually inputting code information, identification information or the like; a bill dispenser 54 providing change in the form of bills such as some or all of United States ten dollar bills, five dollar bills and one dollar bills; and a coin dispenser 52 for dispensing change in the form of coins such as some or all of quarters, dimes, nickels and pennies. For simplicity, the change dispenser system 24 may use only a smaller set of denominations. For example, dimes may be eliminated as they can be readily replaced by nickels. The pump system 22 and the change dispenser system 24 are interconnected to form a network. The network also includes the site controller 26 that performs a number of functions including monitoring pump system operations, generating and recording codes together with associated balances, receiving code inputs from the cash dispenser system 24, and controlling operation of the cash dispenser system 24 to provide change. The site controller 26 also includes two communication ports, generally identified by arrows 54, such as modems. The communication ports allow the site controller 26 to communicate with external card authorization systems, such as the BUYPASS authorization system, PAYPOINT authorization system or other credit card authorization network, and the host computer 12 (FIG. 1) of the automated filling station network 10. The site controller 26 of the illustrated embodiment is a computer and can be any suitable processing system such as, for example, an Intel PENTIUM processor based IBM computer compatible system with at least a 1 GB hard drive and 16 MB of RAM. The controller 26 runs Microsoft Windows 95 operating system or another operating system.

Various functions that are executed by the site controller 26 are outlined in the flow diagrams of FIGS. 3 and 4. More specifically, FIG. 3 illustrates a number of pump system related processes and FIG. 4 illustrates various cash dispenser system related processes.

Referring to FIG. 3, the pump system may be programmed to continuously or periodically display (56) a payment prompt such as "select payment type" or "insert payment" between transactions. A customer initiates a transaction by inserting a card, cash, or (where applicable) a credit voucher. The controller receives (58) a corresponding transaction initiation signal and the pump system receives and credits (60) payment. Payment is typically received at the pump system by receiving currency through the bill acceptor or by obtaining authorization of a credit or debit card in a specified amount (even though only the transaction amount may eventually be debited from the corresponding card account). Further processing of the transaction depends on whether the customer has selected cash or credit (62). For cash payments, the control system monitors the amount of currency received through the bill acceptor and records (64) the total payment amount. For credit payments, the control

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system contacts (66) an authorization service, waits for a response and receives (68) an authorization signal. If the card is not approved, the control system generates (72) an error message which is displayed to the customer. If the card is authorized, or if the customer pays in cash, then the pump is enabled (76) and the fueling process can begin.

Alternatively, the pump may be enabled prior to obtaining authorization as indicated in phantom on FIG. 3. If authorization is subsequently denied, then the control system can disable (74) the pump after fueling has been initiated. It will be appreciated that such immediate pump enablement entails a risk of loss by the fuel vendor. However, it is anticipated that any such losses will be minimal due to the speed of operation of the authorization system. Any such losses may be justified by the improved customer convenience and customer throughput resulting from reduced authorization delays.

During the fueling process the control system monitors (78) the fueling process to detect (80) a fueling complete signal. Depending upon the type of pump system employed, such a fueling complete signal may be generated in response to hanging up the pump nozzle or in response to manually turning the pump off by flipping a pump lever. Upon detecting the fueling complete signal, the control system communicates with the pump system to determine the transaction amount and compares (82) the payment amount to the transaction amount to determine whether a balance is due (84). If no balance is due, the control system generates a receipt (86) and the pump system related process is complete. On the other hand, if a balance is due, the control system generates (88) a code and associates the code with the balance due. The code can be generated by any suitable software such as random or modified random number generator (excluding previously used codes), or custom software for selecting predetermined codes from a code database. The control system relates the code to the corresponding balance and stores the code and balance in a coded balance data base that is indexed by code. In this manner, the coded balance information can be transmitted (92) to the change machine in response to a code input by the user.

The code can be provided (90) to the customer in any suitable form. For example, the code can be printed on the transaction receipt that is reported to the customer. Alternatively, a code such as a password or character string can be displayed to the customer on the pump system monitor. As a further alternative, it is anticipated that the pump system may be provided with the capability to issue a ticket or voucher to the customer that includes optically or magnetically encoded information corresponding to a numeric or alphanumeric code.

Once the customer has received the code, the customer may either retain the code and receive credit for the balance due in a subsequent fueling transaction at a site within the automated filling station network, or the customer may proceed with the code to the change dispenser system to receive change in the form of currency. FIG. 4 illustrates the change dispenser system related process. The process can be implemented by the customer in response to instructions and/or prompts displayed on the change dispenser system monitor. Upon approaching the change dispenser system, the customer initiates the change dispenser system process by entering the code supplied by the pump system e.g., by entering the code manually or, where available, by inserting a machine-readable voucher. The code is transmitted to the control system by the change dispenser system. The control system receives (94) the customer code input and retrieves



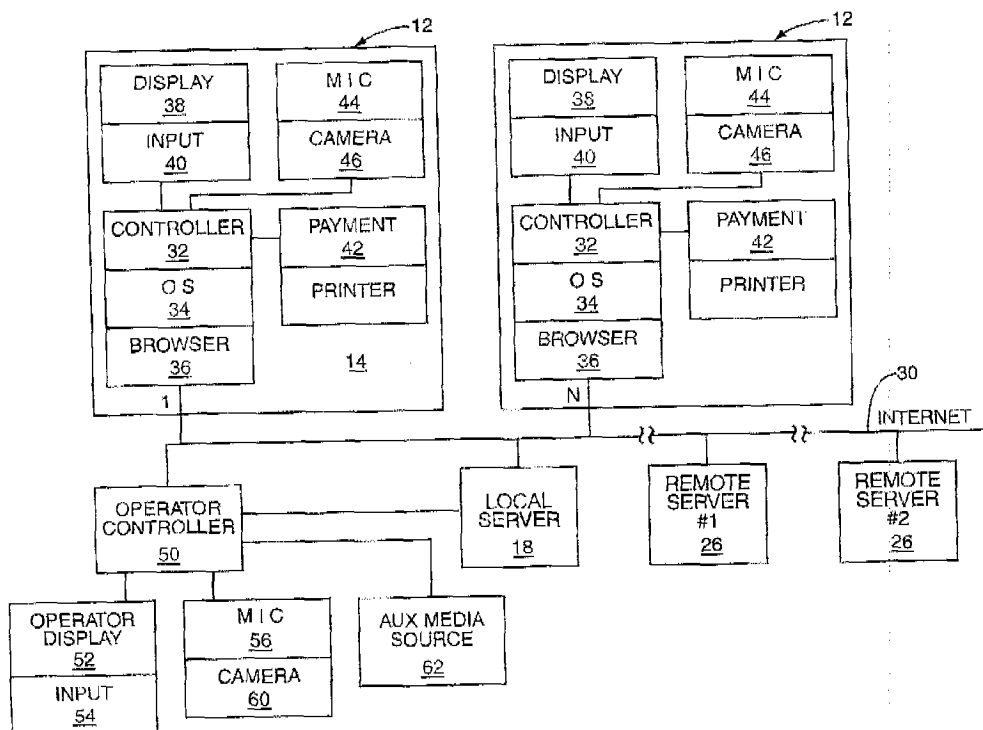
US 20010018627A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2001/0018627 A1**

Leatherman et al.

(43) **Pub. Date:** **Aug. 30, 2001**(54) **INTERNET CAPABLE BROWSER
DISPENSER ARCHITECTURE****Publication Classification**(51) **Int. Cl.⁷** **G06F 17/00**(52) **U.S. Cl.** **700/234**(76) **Inventors:** **Russel D. Leatherman**, Summerfield,
NC (US); **William C. Royal JR.**,
Greensboro, NC (US)**Correspondence Address:**
WITHROW & TERRANOVA, P.L.L.C.
P.O. BOX 1287
CARY, NC 27512 (US)(21) **Appl. No.:** **09/828,050**(22) **Filed:** **Apr. 5, 2001****Related U.S. Application Data**(60) Continuation of application No. 09/499,979, filed on
Feb. 8, 2000, which is a division of application No.
08/896,988, filed on Jul. 18, 1997, now Pat. No.
6,052,629.(57) **ABSTRACT**

The invention relates to an interactive fuel dispenser system having a plurality of fuel dispensers operating in conjunction with a local server. Each dispenser generally has two fueling positions, each with a graphical user interface through which a customer interacts. In contrast with the recent trend in turning fuel dispensers into super computers, applicants' provide a dispenser architecture that need only be sufficient to establish interactivity with a server to create multimedia applications and carry out POS functions with a browser interface. Each fueling position acts as a client of a local server at the fuel station store. In the preferred embodiment, each fueling position client also may access remote servers connected to the same network in which the fueling position clients and the local server are connected. Preferably, this network is or is connected to the Worldwide Web of the Internet.



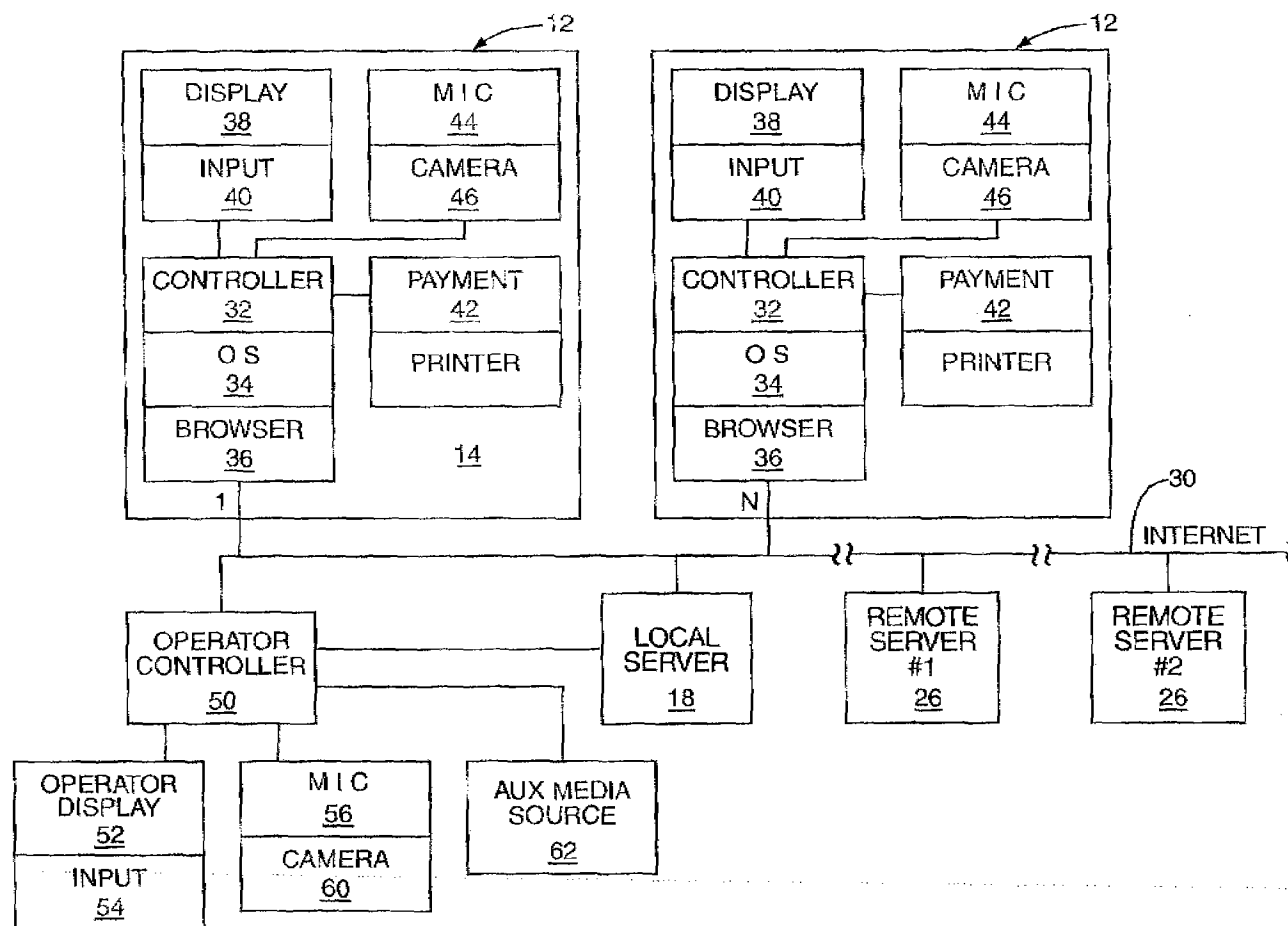


FIG. 2

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INTERNET CAPABLE BROWSER DISPENSER ARCHITECTURE

BACKGROUND OF THE INVENTION

[0001] The invention relates generally to fuel dispensers and, more particularly, to fuel dispensers and dispensing systems providing interactive, multimedia functions to a customer. In recent years, fuel dispensers have become more than a means for fueling a vehicle. Service station owners are advertising at the dispenser with everything from simple signs to video displays running commercials. Some service stations have integrated fast-food or quick-serve restaurants, and the dispensers have been converted into complex point-of-sale (POS) systems for ordering food from these restaurants. Additionally, the POS systems facilitate ordering other services, such as car washes, at the gas station. Most modern fuel dispensers include card readers or other payment means allowing payment for not only fuel, but also any products or services ordered at the dispenser.

[0002] As the amount of information and number of products and services provided to the consumer increases, dispenser suppliers need economical ways to provide information to the customer and market the fuel company's primary products and services. As the amount of information and number of products and services increase, the number of ways to present such information to the customer increases exponentially. Each oil company and station operator wants to provide information and merchandise to their customers in different ways. Until applicants' invention, these companies and station operators were significantly limited in providing information and marketing goods and services at the dispenser.

[0003] A typical fuel dispensing system includes a plurality of fuel dispensers with two fueling positions per dispenser and a central site controller. Sophisticated dispenser systems incorporate expensive, hardware-intensive controllers in each dispenser. Many fueling positions may include a display and touch pad (or screen) to order goods or services. Until now, customer interactivity was limited to choosing an option presented by the dispenser. Unfortunately, changing the various options or presentations for the customer involved changing firmware or downloading new software to each dispenser. With any software application, revisions are necessary and when revisions are made, every dispenser at every desired location must be upgraded.

[0004] Although the information age is upon us, modern fuel dispensers have been unable to take full advantage of the tremendous merchandising opportunity presented when a customer is fueling a vehicle. Likewise, customers cannot access useful information during this period. Modern dispensers are unable to provide national advertising and merchandising campaigns or offer information a traveler may want or need during fueling. For example, customers cannot purchase products or services outside the realm of the local station store, such as concert or movie tickets. Valuable information, such as news, weather, traffic updates or customized road maps, is unavailable. Although modern dispensers are highly sophisticated, the cost of providing customized local and remote merchandising, as well as information dissemination, has not been economical.

[0005] Prior dispenser technology provided little, if any, integration between advertising and merchandising at the

POS. Even in today's most sophisticated systems, advertising is sent to the fuel dispenser from a separate source and often displayed on a separate display than the POS. See Gilbarco's U.S. Pat. No. 5,602,745 for Fuel Dispenser Electronics Design, U.S. Pat. No. 5,543,849 for Synchronization of Prerecorded Audio/Video Signals with Multimedia Controllers, and U.S. patent application Ser. No. 08/659,304, filed Jun. 6, 1996. Each reference is incorporated herein by reference. The POS simply functions to display order options to the customer, and the customer responds accordingly. The current trend is to increase the computational ability within each dispenser when additional functionality is needed. Although current dispensers are highly sophisticated, the cost to provide each fueling position on each fuel dispenser with the computational horsepower to fully realize multimedia applications outweighed the benefits, and providing customized software for the thousands of stations throughout the world would be very expensive.

[0006] Thus, there is a need to provide an economically viable dispenser architecture capable of providing multimedia functions, such as order entry, advertising, merchandising and information dissemination. There is a need for a user-friendly graphical user interface through which a customer can interact to access these functions or services. Furthermore, there is a need, not only for local merchandising and information dissemination, but for remote merchandising and information dissemination from sources that are not directly related to the main service station store to take full advantage of the merchandising potential at the dispenser. There is also a need for an interactive fuel dispenser capable of providing a customer the opportunity to order foods, products and services from the local station store in addition to purchasing products or services, such as movie tickets, or downloading information such as news, weather, traffic updates or road maps from local or remote sites.

SUMMARY OF THE INVENTION

[0007] Applicants' fulfill this need by providing an interactive fuel dispenser system having a plurality of fuel dispensers operating in conjunction with a local server. Each dispenser generally has two fueling positions, each with a graphical user interface through which a customer interacts. In contrast with the recent trend in turning fuel dispensers into super computers, applicants provide a dispenser architecture that need only be sufficient to establish interactivity with a server to create multimedia applications and carry out POS functions with a browser interface. Each fueling position acts as a client of a local server at the fuel station store. In the preferred embodiment, each fueling position client also may access remote servers connected to the same network in which the fueling position clients and the local server are connected. Preferably, this network is connected to the Worldwide Web of the Internet.

[0008] Each client (fueling position) may include a graphical interface and browser to perform interactive functions at the dispenser. The hardware at the dispenser and fueling position is preferably minimal and only sophisticated enough to establish interactivity with the fueling customer in order to minimize cost. Computer intensive services and functions may be provided at the local server or one of the remote servers. Typically, the browser at each fueling position simply requests services from one of the servers on the

network to provide any type of function or service desired at the fueling position. Most notably, applicants' invention is not limited to simple "mass media" marketing with no interaction taking place between the customer and the advertising. The invention actively encourages merchandising at the fueling position. Interactive video/graphic advertising messages provide customers the ability to immediately react to the advertising or merchandising and purchase the products or services advertised, whether local or remote. The dispensers may include card readers at each fueling position to receive payment for the goods or services at the same time payment is made for the fuel.

[0009] The invention provides a system for providing interactive video/graphic presentations to a customer and offering the customer selections for services and merchandise as desired. By minimizing the hardware and software commitment at each dispenser and providing services from local and remote servers, an interactive, multimedia system, which is easily updated and economically feasible, is made possible. Providing such remote services is virtually impossible to reproduce within the confines of a service station environment without applicants' invention.

[0010] In particular, the invention expands local advertising and its minimalist form of merchandising into an opportunity for sophisticated local and off-site advertising and merchandising ranging from ordering fast food and car washes to purchasing movie tickets or any other product or service desired. Remote products or services may be sent directly to the customers home. Another unique option provided by applicants' invention is an audio or audio/video intercom between the fueling position and one of the local or remote servers. The intercom provides an audible (and visual) interface between a station operator or other individual. The intercom is especially useful with order entry.

[0011] The invention is preferably implemented in a dispenser having a processor, operating system and graphical user interface running a hypertext transfer protocol (HTTP) compliant browser. Each fueling station at each dispenser allows a customer to browse the Worldwide Web of the Internet to the extent desired by the station operator. In short, the fueling position acts as a hypertext markup language (HTML) compliant client with a graphical user interface and browser.

[0012] HTTP is a known application protocol that provides users access to files using the standard page description language known as HTML. The HTTP provides tremendous flexibility in accessing files in and including different formats, such as text, graphics, images, sound and video. HTML provides basic document formatting and allows a developer to specify "links" to and between any combination of local and remote servers as well as files therein. Use of a HTML compliant client browser involves specification of a link via a uniform resource locator (URL). Once a link is specified, the client makes a request to the identified server and receives a document formatted according to HTML. These documents are often referred to as "web pages". For more details on HTML and its specific implementation, the *HTML Reference Manual*, published by Sandia National Laboratories and available on the Internet at http://www.sandia.gov/sci_compute/html.ref.html, is incorporated herein by reference.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a diagram of a fuel station store having dispensers and a local station server connected to the Internet according to the present invention.

[0014] FIG. 2 is a schematic of the fuel dispensing system architecture of the system of FIG. 1.

[0015] FIG. 3 is an elevation view, partially away of a fuel dispenser according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] Referring now to the drawings in general, and FIG. 1 in particular, it will be understood that the illustrations are provided to describe a preferred embodiment of the invention and are not intended to limit the invention thereto. A fuel station environment 10 is shown having a plurality of fuel dispensers 12. Each dispenser 12 typically has at least two fueling positions 14 capable of delivering fuel and providing a point-of-sale (POS) interface. As seen in FIG. 3, a fuel dispenser housing 12 is provided with conventional fuel supply line 128, metering device 130, outlet 134 and nozzle 136. The metering device 130 communicates data about the volume of fuel dispensed along line 132 to a transaction computer 140.

[0017] The dispensers include the normal fuel delivery hardware required to deliver fuel to a customer in a controlled manner, such as pumps, flow control valves, nozzles, hoses and control electronics. A main service station store 16 is operably connected to each dispenser 12 and fueling position 14 in addition to a local station server and control system 18. The server and control system 18 are operationally associated with POS systems and/or transaction systems for a convenience store 20 and one or more quick service restaurants 22, an associated car wash 24 or other service provider. In the preferred embodiment, a customer at any of the fueling positions 14 of any of the dispensers 12 may access the local station server 18 or any number of remote servers 26, which are located outside of the fuel station environment 10, via the Internet or similar network 30. The dispenser may have a direct Internet connection and/or a direct interactive connection to the local server 18.

[0018] Turning now to FIG. 2, a fueling position 14 for each dispenser 12 is shown in greater detail. Each fueling position is associated with a controller 32, operating system 34, browser 36, display 38 and input device 40, such as a keyboard, touch pad or touch screen. The display 38 and input device 40 in conjunction with the controller 32, provide a graphical user interface for each fueling position 14. The operating system 34 is adapted to run any number of software applications required to operate the dispenser, graphical user interface and the network browser 36. In more advanced embodiments, each fueling position 14 may include a payment accepting device 42, such as a magnetic strip card reader, smart card reader, or currency acceptor, in addition to a microphone 44 and camera 46 to provide an audio or audio/video intercom with a similarly equipped server or system. Other payment systems may be substituted.

[0019] Each graphical user interface may include its own control system or operate in conjunction with a single control system adapted to operate both interfaces on a single

dispenser 12. In a preferred configuration of the invention, each fueling position 14 acts as a thin client capable of interacting with a network of servers. The controller 32 and associated user interfaces are preferably designed to minimize the hardware commitment necessary at each dispenser, while having sufficient capability to establish interactivity with the user and provide fuel dispenser control. Most computer intensive functions are provided as services from the various local and remote servers 18, 26. Merchandising and business rule interpretation are handled in the systems nomenclature as services. Although certain functions and services may be run at the dispenser, most functions dealing with customer transactions, information dissemination and advertising or merchandising are preferably performed as services performed remotely and accessed by a client (fueling position). The browser software for each client has the ability to request services either locally or remotely, via the Internet or similar network. Certain services may be automatically requested by the browser at each client, while others await responses by a customer.

[0020] The local server and control system 18 will preferably include or be associated with a central operator controller 50. The operator controller 50 may act as the local server 18 or, in the alternative, may operate in association with a separate local server 18. The controller 50 is typically a central site controller used to interface and control pump operation, certain dispenser and store transactions as well as general control of the fuel station store. The controller 50 may also facilitate station operator interaction with the client through an operator display 52 and operator input 54. The local server preferably controls interactivity with the network 30 and/or the dispensers 12.

[0021] The audio or audio/video intercom system may include an operator microphone 56 and camera 60. Thus, a station operator may interact with a customer with a combination of text, graphics or audio/video intercom. The controller 50 may include audio and video signal processing capabilities for intercom functions. Furthermore, an auxiliary media source 62 associated with the local server 18 may provide video advertisements, interactive merchandising and promotion, as well as interactive information dissemination. The media source 62 may include media sources such as CDs, laser discs, DVDs (digital video disc), streamed audio or video over the Internet or any other suitable media source. Notably, all of the activities may also be provided remotely through network 30.

[0022] The basic system architecture is a network connecting the dispensers 12 and the local station server 18. Each fueling position 14 is treated as a client capable of accessing services provided by the local server 18. Interactivity between the fueling positions 14 and the local station server 18 is accomplished in a manner similar to the way interactivity is accomplished on the Internet, and preferably, identical to the manner in which interactivity is accomplished on the Internet. The system preferably uses HTML and HTML compliant components, media players and services. For local services, each client uses the respective browser 36 to request services from the local station server 18. The graphical user interface is configured to provide easy operation and allow customers to intuitively select the various options presented and receive information, products or services accordingly. The requested services will control the dispenser and its display content as desired and will react

to further customer actions to facilitate interactivity. For external services, the client connects to remote services outside the local service station 10 using the same browser interface.

[0023] When accessing remote servers on the Internet, the system architecture uses the hypertext mark-up language (HTML). The Internet is a known computer network based on the client-server model. Basically, the Internet comprises a large network of servers accessible by clients. Each of the clients operates a browser, which is a known software tool used to access servers through Internet access providers. A server operates a "web site" which supports files in the form of documents and pages. A network path to a server is identified by a uniform resource locator (URL) having a known syntax for defining a network connection.

[0024] The Worldwide Web is that collection of servers of the Internet that utilize the hypertext transfer protocol (HTTP). HTTP is a known application protocol that provides users access to files, which can be in different formats such as text, graphics, images, sound and video, using a standard page description language known as hypertext markup language (HTML). HTML provides basic document formatting and allows the developer to specify links to other servers and files therein. Use of an HTML compliant client browser involves specification of a link via the URL. Upon such specification, the client makes a request to the server identified in the link and receives a web page, basically, a document formatted according to HTML, in return. HTML provides exceptional freedom in creating graphics/text/graphic images and associated audio between servers and clients. HTTP and HTML allow complex services to be accessed by clients having a minimum amount of hardware sophistication. The primary computational horsepower is reserved for the servers providing the requested services.

[0025] With the described embodiment, making interactive video/graphic presentations to a customer and offering the customer selections for services and merchandise is possible without extensive computational power at each dispenser and fueling position. When the network connecting the local server 18 with the dispensers 12 is connected to a larger network 30, such as the Internet, a tremendous increase in the number of services and functions provided to the customers is provided. The customer may interact with services outside of the local environment as well as increase the functionality of the local environment. Local services are enhanced by making it easier to provide local advertising and merchandising at each fueling position 14. These services are easily customized by those familiar with HTTP and HTML.

[0026] Enhanced graphics and customer interaction need only be provided to the local server 18, and customers at each fueling position 14 may access the information through the browser 36. Downloading or updating each fueling position is no longer required. The Internet will provide world wide access to services, such as advertising and merchandising, that would be too costly or impossible to reproduce within the confines of traditional service stations. Local station operators are no longer required to physically incorporate advertising or merchandising within their systems. The local system operator need only provide links to Internet services providing merchandising, advertising or

“Las reivindicaciones 39 a 47 del capítulo reivindicatorio modificado no se aceptan porque: el lector RFID (reiv. 39), el teclado (reiv. 40), la consola de autorización local (reiv. 41), el dispositivo para recolectar información (reiv. 42), así como los pasos de: leer cartas con la tarjeta (reiv. 43), leer el RFID (reiv. 44), leer la información guardada en el teclado (reiv. 45), leer información de la consola (reiv. 46) y recolectar información relacionada con transacciones (reiv. 47), son elementos que amplían la materia presentada en la solicitud internacional inicial, por lo cual no se cumple con las disposiciones del Art. 34.”

Como tales reivindicaciones no cumplen los requerimientos del Art. 34, se sugiere modificar el pliego suprimiendo las reivindicaciones mencionadas.

3. Objeto de la invención

La presente solicitud se titula "CONTROLADOR DE BOMBA DE COMBUSTIBLE", (folio N° 1).

El objeto de la presente solicitud de patente se refiere a un aparato controlador de bomba dedicado para una instalación dedicada y próxima a una única bomba de combustible.

De otra parte, el pliego reclama un aparato controlador de bomba dedicado para instalación dedicada para y próxima a una única bomba de combustible, relacionado en las reivindicaciones 1 a 17, 36, 38 y 48, un método para controlar bombas de combustible, relacionado en las reivindicaciones 18 a 34, 37 y 49, y un sistema de control de bomba de combustible, relacionado en las reivindicación 35.

El objeto de la solicitud definido anteriormente se clasificó en la IPC B67D 5/26

4. Claridad de la solicitud

4.1. Descripción (artículo 28 D. 486)

La descripción calificada NO revela la mejor forma de ejecutar (fabricar) la invención, esto debido que se mencionan los componentes del controlador (procesador, memoria, interfaz de comunicación, etc.) pero NO la relación funcional o de estructura entre ellos, es decir no se explica la forma de conectar los componentes (serial, paralelo, inalámbrico, etc.), la ubicación dentro de una estructura, los circuitos presentes, el cableado, etc.

La información contenida en la descripción se limita a presentar la forma de operación del controlador y algunas funciones de la memoria (almacenar información) y el procesador. Esta información NO es suficiente para que una persona versada en la materia ejecute (fabrique) el objeto reclamado en la solicitud, es decir, con la información de la descripción, una persona versada en la materia **podría operar pero NO fabricar el controlador de bomba** de tal forma que no es posible evaluar el aporte del solicitante al estado del arte.

Por otra parte, el solicitante debe aportar la traducción de las figuras 1, 2 y 3 mencionadas en la descripción, ya que en la respuesta al oficio anterior, tales figuras no fueron radicadas.

La oficina deja en claro que, el solicitante está obligado a divulgar la invención pues de lo contrario la patente podrá ser denegada. Dicha obligación se considerará cumplida, cuando la descripción contenga todas las indicaciones, que necesita la persona de nivel técnico medio, para ejecutar la invención, en especial, aquellas indicaciones que no estén comprendidas en el estado de la técnica.

Puesto que la información de la descripción calificada **no** permite ni evaluar ni ejecutar la invención, no cumple los requisitos exigidos por el Art. 28 de la Decisión.

4.2. Reivindicaciones (artículo 30 D 486)

El pliego reivindicatorio presentado no define la materia que se desea proteger ni es

claro y conciso por las siguientes razones:

La reivindicación 1, no especifica claramente cuales son los elementos característicos de la invención que aporta el solicitante al estado del arte, tan solo se limita enumerar una serie de componentes de un aparato controlador de bomba, tales como un procesador, una interfaz de comunicaciones y unos medios de control, pero no define como estos elementos se relacionan entre si (tipos de conexión, circuitos, montaje, etc.).

Adicionalmente no queda clara la naturaleza de los "medios de control" mencionados, es decir si estos medios son componentes de hardware o de software.

La reivindicación 2 es muy general, esta menciona una interfase de comunicaciones, pero no menciona que tipo de interfaz, a que elemento esta conectada, como es la conexión, etc. Adicionalmente la idea de las reivindicaciones dependientes es aclarar/delimitar los elementos contenidos en la reivindicación que los precede, NO agregar nuevos elementos ya que todos estos nuevos elementos deberían haber sido especificados en la reivindicación principal. La misma situación ocurre con las reivindicaciones 3, 6, 7, 16 y 48.

La reivindicación 4 NO especifica claramente que son los medios de control, tan solo se limita a enunciar el uso o utilidad que tienen estos medios.

La reivindicación 5 esta mal referenciada. Adicionalmente NO es clara la naturaleza de los "medios principales de recepción" (hardware o software). La misma situación ocurre con las reivindicaciones 14, 15 y 17

Las reivindicaciones 9 a 13, no son claras porque se desvían hacia el uso de la impresora colocada en el dispositivo periférico: "9. El aparato de la reivindicación 8:... dicha impresora imprima un primer recibo", "10. El aparato de la reivindicación 8:... dicha impresora imprima un recibo duplicado", etc.

Las reivindicaciones 18 a 34, 37 y 49 reclaman un "método para controlar bombas de combustible" que presenta las etapas de: "Instalar un controlador... dedicar dicho controlador... establecer comunicación entre dicho controlador... Controlar las operaciones de distribuciones de dicho... almacenar información transaccional...". De acuerdo al procedimiento establecido, el método presentado no cumple los requisitos estipulados en la reglamentación, ya que instalar, dedicar, establecer comunicación, etc., son unas etapas que hacen parte de una **secuencia de operación** del equipo y no una secuencia de etapas conducentes a la obtención de un producto.

La reivindicación 35, no es clara porque hace una enumeración de los componentes de un sistema de control de bomba de combustible, pero no establece la relación funcional entre los mismos ni se define una función entre ellos, por lo cual no es posible determinar una estructura o un aparato de acuerdo a lo establecido por la reglamentación.

Por motivos de concisión una solicitud debería contener una sola reivindicación independiente por categoría (producto o procedimiento), a menos que la definición del objeto lo exija (por ejemplo el caso de una antena y un receptor). La reivindicación 35 se refiere a un sistema de control de bomba que incluye las mismas características del aparato de la reivindicación 1, por lo cual NO es clara la intención de colocar dos reivindicaciones independientes que se refieren a la misma materia. Por tal motivo la inclusión de varias reivindicaciones independientes para definir un

mismo objeto afecta la concisión del pliego.

Las reivindicaciones 39 a 47 deben retirarse del pliego por que amplían la materia de la solicitud originalmente aportada.

Por los motivos anteriores, el pliego reivindicatorio calificado NO cumple con los requisitos de claridad y concisión exigidos en el Art. 30 de la Decisión.

5. Reivindicaciones relativas a un uso o a un uso distinto (artículos 14 y 21 D 486)

5.1 Las reivindicaciones del pliego calificado no cumplen los requisitos del artículo 14 porque no definen un procedimiento de acuerdo a la práctica establecida. Como es bien sabido, la esencia de las reivindicaciones consiste en definir la invención, con lo cual, se fija la extensión de la patente y se hace posible delimitar su alcance respecto del estado de la técnica, además, una reivindicación independiente debe definir la invención por medio de características técnicas, de forma general, tal que contenga todas las características esenciales para alcanzar el resultado declarado y, las dependientes son para delimitar (aclarar) una característica contenida en la independiente.

El método para controlar bombas de combustible **utilizando** un controlador de bomba dedicado, de las reivindicaciones 18 a 34, 37 y 49, NO cumple con lo establecido en el Art. 14 ya que el mencionado método se refiere a las etapas de operación del controlador de bomba. Este procedimiento NO puede considerarse patentable porque: i) No corresponde a un proceso industrial que conduzca a la obtención de un objeto (tangible), ii) No resuelve un problema técnico (el problema planteado en la solicitud lo resolvería el controlador de bomba dedicado) y iii) La operación de un sistema es un procedimiento rutinario en donde lo único que se hace es **utilizar** el aparato (en este caso el controlador de bomba) para realizar las funciones para las que fue diseñado.

5.2 Las disposiciones del artículo 21 de la Decisión 486 se afectan porque el procedimiento de la reivindicación 18 y sus dependientes se refiere a una serie de pasos de operación del controlador. Lo cual, tal como el preámbulo de la reivindicación lo dice es la **utilización** del controlador para realizar las operaciones de control. De tal manera que el método para controlar bombas NO indica el funcionamiento, relación funcional, o una secuencia de etapas para fabricar un producto sino la forma de **operación y utilización** del aparato controlador. Dadas las anteriores razones, se encuentra que el método mencionado corresponde al uso del controlador y no a nuevas soluciones técnicas para el problema del control en sitio de bombas de combustible.

6. Determinación del Estado de la Técnica

Considerando que la solicitud reclama prioridad del 2 de octubre de 2001, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a esta. Se realizó búsqueda de documentos relevantes dentro del estado de la técnica, entendiendo como estado de la técnica la definición provista en el Art. 16 D 486, y las excepciones fijadas en el Art. 17 de la misma.

No obstante, la solicitud presenta problemas de claridad, se realizó una búsqueda parcial **la cual se complementara una vez se realicen los ajustes a la solicitud.**

Se encontró como anterioridades los documentos relacionados a continuación que

afectan la patentabilidad del objeto de la presente solicitud

N°	Documento*	Título	Fecha de publicación
D1	US5895457	AUTOMATED FILLING STATION WITH CHANGE DISPENSER	1999-04-20
D2	US2001/0018627	INTERNET CAPABLE BROWSER DISPENSER ARCHITECTURE	2001-08-30

*los documentos mencionados se anexan al expediente

7. Análisis de patentabilidad (artículo 14 D486)

En cumplimiento del Art. 14 D486 se procedió a evaluar los requisitos de novedad y aplicabilidad industrial, con el fin de establecer la patentabilidad del modelo objeto de la solicitud en estudio.

7.1. Novedad (artículo 16 D486)

El requisito de novedad se evaluó por comparación entre lo solicitado y los documentos citados en el numeral 6.

Para la realización del examen de novedad, **solo se tuvo en cuenta las características técnicas que definen el objeto de la solicitud**, así que las reivindicaciones definidas por características tales como los usos NO fueron evaluadas con respecto al estado del arte, ya que estas características no pueden protegerse mediante el mecanismo de patente.

La presente solicitud de patente se refiere a un aparato controlador de bomba dedicado que presenta las siguientes características:

- Al menos un procesador
- Memoria de datos
- Interfase de comunicaciones
- Medios de control de la bomba de combustible (de naturaleza no especificada, ver aparte 4,2)

La anterioridad **D1** se refiere a un sistema automático para una estación de servicio que da cabida a las necesidades del cliente, incluyendo los clientes con dinero efectivo mediante el suministro de cambio en forma de moneda. La invención presentada en este documento puede ser un sistema sencillo o una red de estaciones, donde la red **10** incluye un determinado número de estaciones **16** comunicadas con un servidor remoto **12** por medio de vías públicas o privadas tales como internet. Cada sitio de estación contiene un sistema de bomba de combustible **22**, al menos un dispensador de cambio, un controlador de bomba **26** implementado como hardware, firmware o software. Cada sitio también cuenta con interfases, las cuales pueden incluir: una interfase para el almacenamiento de datos **18**, o una interfase de reinicio y mantenimiento **20**, la cual puede incluir una interfase de usuario tal como un teclado. Adicionalmente el sistema incluye medios para imprimir recibos (col. 3 línea 1).

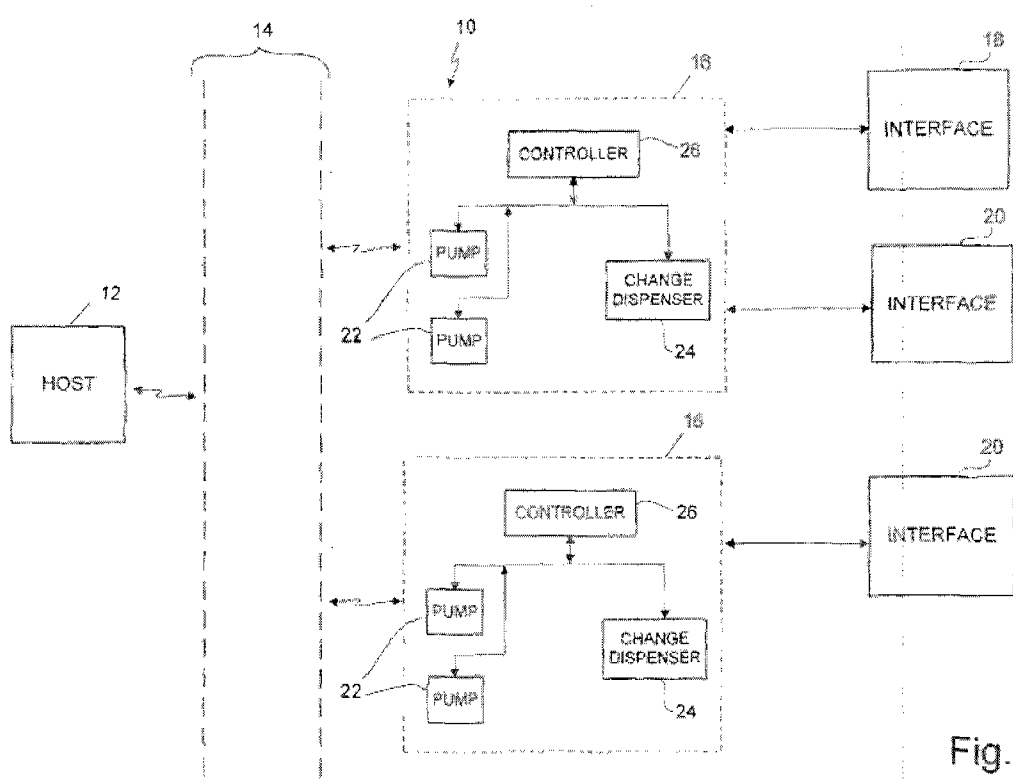


Fig. 1

La Fig. 1 muestra el esquema del sistema desarrollado en D1. Como se puede ver en este esquema, la anterioridad D1 contiene todos los elementos característicos de la presente solicitud de patente, por lo cual está NO tiene novedad.

El documento D2 se refiere a un sistema dispensador de combustible interactivo que tiene una pluralidad de dispensadores de combustible operando en conjunto con un servidor local. El sistema 10 tiene una pluralidad de dispensadores de combustible 12. Cada dispensador tiene al menos dos posiciones para el suministro de combustible 14 capaces de entregar combustible y proporcionar una interfase de punto de venta POS. Cada unidad tiene asociado un controlador 32, un sistema operativo 34, un dispositivo de entrada 40. En la figura 2 de la anterioridad se puede ver que cada dispensador tiene interfases adaptadas para conectar cámaras, impresoras, lectores de tarjetas, micrófonos, etc. Como se puede ver, el documento D2 también contiene todos los elementos característicos de la solicitud, por lo cual afecta la novedad de la misma.

De acuerdo a lo anterior, la solicitud de patente no presenta ninguna ventaja o efecto novedoso con respecto al estado del arte, por consiguiente se considera que el objeto de la solicitud no tiene Novedad y no cumple con los requisitos de los artículos 14 y 16 de la decisión.

8. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

Nº	Documento Nº	Reivindicaciones Afectadas	Requisito que Afecta
D1	US5895457	1 a 17, 35, 36, 38 y 48	Novedad
D2	US2001/0018627	1 a 17, 35, 36, 38 y 48	Novedad

9. Respuesta a los argumentos del solicitante:

Los argumentos presentados por el solicitante como respuesta al oficio No. 11672,

fueron considerados, y se tuvieron en cuenta para realizar nuevamente el examen de fondo, presentado en los párrafos anteriores.

Por otra parte reiteramos que las reivindicaciones 39 a 47 amplían la materia contenida en la solicitud inicial por lo cual deben retirarse del pliego, Adicionalmente recordamos al señor representante adjuntar las figuras debidamente traducidas, ya que estas no fueron radicadas junto con la respuesta al oficio No. 11672.

Si el interesado desea continuar la tramitación, deberá presentar una descripción clara y completa junto con un pliego reivindicatorio que defina la materia, que se desea proteger, en forma clara y concisa, acorde a lo explicado arriba.

Se recomienda, que tenga en cuenta que el replanteamiento de esos apartes NO podrá implicar una ampliación de la protección que correspondería a la divulgación contenida en la solicitud inicial, de acuerdo a lo que establece el artículo 34 de la Decisión 486.

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2 Literal e) del capítulo quinto del título primero de la Circular Única No. 10 de 2001.


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha 20 de mayo de 2008

CONCEPTO TECNICO No. 1223	EXAMINADOR TECNICO Código No. 202082
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