Method and apparatus for an integrated product market data and consumer behavioral platform

FIELD OF THE INVENTION

The present invention relates to a method and apparatus for an electronic processor to generate a series of unique data for physical imprinting onto suitable parts of a product made for sale, allowing the purchaser of the product to make use of the unique data imprinted as input for access to a predetermined web-site further allowing the purchaser to interact with the operator of the web-site for purposes of updating or authenticating the purchased product, and/or allowing the purchaser the option of purchasing additional products, and/or allowing the purchaser to make use of the said unique data to redeem for products from affiliated agents of the said operator.

SUMMARY OF THE INVENTION

It is object of the present invention to provide for a system and method to allow providers of goods and services to gather intelligence data from the consumers of the said goods.

However, the very act of gathering any kind of information and/or response from consumers may provoke a perception of invasion of the privacy of consumers, existing methods where such similar intelligence gathering have already caused much public debate.

The reason for gathering intelligence data from consumers is rather innocent, at least from the view of the providers – making it easier for the providers of goods and services to provide relevant goods for each individual consumer, with the ultimate aim of having the consumer for a long business cycle (to have the consumer "for life").

The problem arises when the type and range of information that providers are keen to gather go beyond what is socially acceptable to consumers.

This is the current dilemma that faces many internet marketing companies that attempts to understand the behavior of visitors to a web-site, with the objective of understanding the visitor to the point where the company can comfortably convert the visitor to a consumer of a product.

This makes it difficult for manufacturers and vendors of a product to derive any kind of accurate

information on the type of customer that is purchasing the product (based on price, design etc.)

Furthermore, there are very little factors where providers of goods and services can easily differentiate their products from the rest of the competition.

Branding, distribution efficiency, product image, etc, are increasingly becoming critical survival factors when just less than 1 decade ago, they are considered the domain of the larger enterprises.

It is very difficult for certain type of products to easily penetrate the market – for example, liquid-based products as such purified water where shelf space and placement can determine the ability of the product to be sold in significant numbers.

The manufacturer of the water may not be able to derive any kind of meaningful representation of the type and demographics of the purchasing population of its products, and there is very little avenues where the product (bottled water) can be highly differentiated from alternatives.

With increased globalization and raised standards in manufacturing capability in many parts of the world today, unique products are difficult to create, and in some cases, leads to proliferation of non-genuine versions of popular products in the market.

The key, therefore, is how to keep existing consumers of a product, "for life", and at the same time, grow the consumer population at an acceptable pace.

Without understanding the consumer, or at least the collective demographics of these consumers, it would be very difficult to say the least.

In one example, manufacturers of soft drinks may target a particular age group of customers such as those in the 12-18 years of age range, and by knowing the basic demographics of these consumers (that 30-50% play computer games, download music and consume soft drinks during such activities), the manufacturer may develop an appropriate device embedded within its products that can interact and engage these consumers in relation to their preferred activities (music, gaming etc.).

By having the device embedded within its products that offer perhaps a variety of preferred options (music or gaming), the manufacturer can gauge in greater accuracy the collective

behavior (of purchasing the product for example) of its targeted consumers.

The present invention attempts to solve the above dilemma by providing additional value to consumers of a particular product that is relatively differentiated, while at the same time, provides the makers of the product with a collective demographic data of consumers, rather than the individual personal information as current models attempt to deploy.

While the present invention relies heavily on computer implemented processes to engage and involve the targeted user, several components are also required in the form of hardware to be embedded within its intended product or item in order to operate the entire invention.

Computer implemented processes of the present invention will include a means to generate unique data or numbers to be then transmitted to a imprinting device that can then print such data onto each individual product.

Some of such products, require more elaborate assembly of hardware to allow for the unique data to be properly stored and utilized by the legitimate purchaser of the product.

In cases such as Compact Disc (CD) based products, it requires that the present invention generates unique data for imprinting onto RFID tags, which are in turn being utilized by the purchaser to be authenticated with a predetermined web-site.

Upon authentication of the purchaser, the web-site may further cause the purchaser to download files that can improve, enable or enhance the overall experience of the product.

The present invention requires several key components in order to function:

1. Unique data generation & manager
2. Imprinted data or data containment unit
3. Data storage and tracking system
4. Data to user access system
5. User access recording module

In the first preferred embodiment of the present invention, there is a processor that is capable of coordinating the various individual components of the overall system.

The processor may be a computer server that contains some or all the said components which may be implemented electronically.

The processor shall activate a module within the computer server to generate a series of unique data which may be in the form of numbers, alphabets, symbols or a combination thereof. This generation of unique data will be electronically implemented by the unique data generation and manager module, which may be loaded into the same memory space of the processor.

The method by which the module generates the unique data is dependent on the system of seed values which are used as input to the random number generator software that is part of the routine within the module.

The processor may also participate in the generation of unique data by selecting the seed values to feed into the random number generator.

The processor may base its selection criteria of the seed value to feed by means of a series of independently operated clocks that are connected to a multiplexer unit that may be driven by a sensor which takes in random values for choosing which clock to run (in order to derive a seed value for feeding into the random number generator)

The module shall translate the generated data to a manufacturing module, or as input into a manufacturing control unit of the manufacturing line of the intended product of which the said data shall be imprinted on.

The manufacturing control unit shall individually determine the manner and method by which the unique generated data shall be imprinted onto each and every product that is designated for the said process.

This is embodiment, this manufacturing control unit may be a separately connected imprinting device such as a laser etching scribe that can etch markings (of unique data or numbers) onto the surface material of the product.

For purposes of illustration, a cap or seal of a bottled water product may be imprinted with the unique data on the inner top surface of the cap or seal.

The generated unique data shall also be simultaneously be provided to another electronic

computer application which will accept the said data as input to determine how each said data shall allow its intended or designed access method, type and quantity when such said data is used as input by a user of the product by which the said data is imprinted upon.

In this case, the computer application will determine the total number of unique data begin generated in a particular session, match the generated numbers to the number of products to be manufactured and subsequently being marked for imprinting, and poll from the processor how each said data is to be attached with a predetermined attribute.

The attribute will dictate how each data can be linked to a item for redemption by the purchaser when it is used as input to a predetermined web-site.

The item is a electronic unit that can be used by the purchaser for participating and playing a pre-selected internet-based computer game system.

The manner by which the said data is input by the user may be via an internet web-site which is designed to receive input from the said user of the unique data prior to granting further access.

In the second preferred embodiment of the present invention, the generated unique data may be imprinted in the form of a token, tag or as part of the product itself.

The unique data may be a series of code that may be imprinted into a radio frequency identification tag (called RFID), or be directly printed onto a suitable surface of the product such as the unique data can only be read and thereby used, if the product is indeed consumed (and not just merely being lifted by any person for the purpose of obtaining the details of the said unique data printed).

The second embodiment can also cover storage medium such as Compact Disc (CD) or Digital Versatile Disc (DVD) that may contain the actual product itself (which may be a computer game, software or electronic content such as a motion picture performance).

In this embodiment, the CD layer may have a slightly depressed area allowing a RFID tag to be deposited and attached to the CD, thus allowing the purchaser of the product to make use of the RFID tag as a authentication token between the purchaser and a vendor web-site.

The vendor web-site will authenticate the purchaser and details of the product (based on the

unique data being stored on the RFID tag), and subsequently perform or allow a series of options for the purchaser to further operate or update the purchased product.

In one example, the CD being embedded with the RFID tag, contains a software product, which may require additional files for updating or enabling the software to be authorized for installation into the purchaser's computer system.

The purchaser will make use of a RFID supplied reader (connected to the purchaser's computer system), for authenticating the RFID attached CD with the vendor of the product via a predetermined web-site.

The vendor web-site may begin to send files for downloading by the purchaser in order to complete the installation or operation of the software product.

In the third preferred embodiment of the present invention, the product may be attached with a RFID tag containing unique data generated by a processor, and additionally, comes with a corresponding RFID reader device.

The purpose of the third embodiment of the present invention is highly applicable in the areas where a product is of high value, such as luxury bags, jewelry, clothing, shoes, etc.

The purchaser of the product is therefore provided the product, a RFID tag containing unique data, a RFID reading device, and further allowing the said purchaser access to a pre-determined internet web-site which may further contain privileged contents that enhances the entire product experience for the purchaser.

This embodiment makes it very difficult for makers of counterfeit versions of the said product to replicate the overall value of the original.

In the fourth preferred embodiment of the present invention, the product being imprinted with unique data will allow the user of the product access to an internet web-site containing information and privileged access, further differentiating the product.

In this embodiment, the said information and access may be the right to further make purchases of versions of products that are only available to users that had purchased an earlier product, such as a "web only" edition of a luxury bag etc.

In the fifth preferred embodiment of the present invention, the unique data generated shall be imprinted onto a product, and upon input by the user of the product, the user shall be granted access to an electronic interactive device via the internet.

The said electronic interactive device may be an online gaming web-site, news portal, or any combination thereof, where the user may access for a pre-determined manner or period, of which further access shall require the user to consumer another similar or identical product bearing another unique data.

In the sixth preferred embodiment of the present invention, the unique data generated shall be imprinted onto a product, and upon input by the user of the product, the user shall be granted access to an internet web-site.

The user shall be provided with an electronic avatar and/or identity for access to another electronic interactive device such as an online gaming web-site.

Subsequent consumption of an identical product shall allow the user to further input the unique generated data, which, since an electronic avatar is already present, shall grant the said avatar electronic items (virtual goods) for use in conjunction with the connection implied with the said avatar (such as to an online gaming web-site).

BRIEF DESCRIPTION OF THE DRAWINGS

Illustrative embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 illustrates the schematic of the overall system including the processor, its critical components such as the random number generator, unique data storage and tracker, data to access system module and the user access recording system

Figure 2 illustrates the manner by which a purchaser of a product makes use of the attached unique data as input to a predetermined internet page, the unique data is also

transmitted to a processor to determine the what type of token or access level to issue to the purchaser

Figure 3 illustrates the imprinting of the said unique numbers onto RFID tags that are embedded either within or with the product concerned, inclusion of a RFID reader with the product to the purchaser of the product, and the general flow of how the said purchaser can access a privileged web-site from operating and using the combination of the RFID tag, reader

Figure 4 illustrates how an imprinted unique data on a product can be lifted by a user, and be used as input onto a designated web-site to gain access, and the corresponding pages that allows the user access to view and redeem tokens which can further allow the user to exchange for predetermined items

Figure 5 illustrates how unique data (B3) is imprinted into the inner top area of the cap or seal (B2) of a bottled product (B1), and be subsequently be utilized by the purchaser of the product as input to a designated web-site (B4), prior to the input of unique data (B3), the web-site may require the purchaser to input an ID (B4A), once the purchaser has accumulated the predetermined number of unique data (B3), a token (B10) is issued and can be exchanged for a designated or purchaser selected item for use during entry and participation of a designated internet computer game system (B11)

Figure 6 illustrates the method by which a RFID tag is embedded onto a CD or DVD storage medium containing a software product. The RFID tag and its related antenna (GB1), (GA1), is sandwiched into the cross sectional layer of the CD/DVD, alternatively, the CD/DVD, shown in cross sectional view (G1) may be constructed with a depressed slump (GF4), allowing the RFID tag and antenna (G3) to be deposited. The location of the slump (GF4) may be located at the inner edge of the CD/DVD where no data is resident (G2), this area (G2) is also a open area where the CD/DVD is to be mounted on a corresponding spindle of a suitable CD/DVD reading device or mechanism.

Figure 7 illustrates the method by which RFID embedded software product is used by the purchaser to gain access to a predetermined internet page to further download additional related content or products, the product (CD1) is contained within a storage medium such as a compact disc (CD1), also embedded with a RFID tag and its related antenna, which will be used by the purchaser by allowing the RFID tag to be read by a suitable RFID reader (CD2), initiating authentication (CD3) between the purchaser and a designated web-site (CD4), which in turn will

route the authentication data to a database (CD5). Once the database (CD5) produces a valid result (CD7) of the RFID unique data being matched, a token is issued (CD10), further allowing the purchaser to proceed to additional internet pages that begins electronic download of files or triggering of a routine to interact with the purchaser and/or its product (CD1)

Figure 8 illustrates the manner by which a bottled liquid-based product cap or seal is being constructed to house a LED and battery assembly, the LED and battery clip (804) is attached to the inner top area of the cap, while the internal LED-cap seal (803) will isolate the contents of the bottle product from the LED and battery clip (804)

Figure 9 illustrates the construction of the LED and battery assembly to be housed into the inside top layer of the cap or seal of the product, the printed circuit board (907) will allow components such as the LED (901), capacitor (903), battery (904) and battery connector (905) to be mounted, allowing the LED (901) to illuminate. The acrylic bulb (902) will enhance the overall illumination effect of the LED. Alternatively, the printed circuit board may be a flexible type with some or all of its components (such as capacitor) to be directly etched into the flexible board, or be mounted with Surface Mount Technology (SMT) components such as a SMT diode, capacitor.

Figure 10 illustrates the manner by which a RFID tag containing unique data is being placed within the LED and battery assembly that is also fitted into the inner top area of the product cap or seal, the RFID tag by alternatively by powered by the battery contained within the LED and battery assembly

Figure 11 illustrates the exploded view of how the LED, battery and RFID assembly can be housed within the inner top area of the product cap or seal

Figure 12 illustrates the cross profile view of a Snap-On LED cap top assembly (121) that houses the circuit board, LED and battery units (1201), constructed with a continuous male snap profile (1204) that will snap into the actual bottle cap (1203) that is constructed with a continue female snap profile (1205)

Figure 13 illustrates the cross profile view of the Snap-On LED cap top assembly (131), and its associated bottled cap (132), further illustrating the manner by which both the assembly (131) and its cap (132) can be fitted together as shown in its cross sectional view (133)

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

According to a first embodiment of the present invention, there is provided a means for a processor to be residing within a computer server system, thus allowing the said processor to coordinate and manage the entire flow of the present invention from generation of unique product data to the linking of access information and related details to each said data.

The processor may be in the form of computer code in an appropriate language such as Java or C, and be resident within the main memory of the computer server.

The processor shall first generate a series of unique data comprising of either numbers, alphabets or symbols, or a combination thereof.

It is important that the generation of the said data be implemented by a separate computer application other than the said processor, thereby enabling different features of the present invention to be replaced without much difficulty.

The number generation module must also ensure that unique data being generated in one session does not get generated from another session, as this will cause confusion when each user of products imprinted with the said data attempts to make use of the said data.

The number generation module may be further controlled by the processor which may check from a list of previously generated data that were unused prior to triggering the number generation module to initiate any one session to generated a series of unique data.

The number generation module may comprise of code that may be similar to the following,

```
*/

#include <stdio.h>

/* Period parameters */
#define N 624
#define M 397
#define MATRIX_A 0x9908b0dfUL   /* constant vector a */
#define UMASK 0x80000000UL /* most significant w-r bits */
#define LMASK 0x7fffffffUL /* least significant r bits */
#define MIXBITS(u,v) ( ((u) & UMASK) | ((v) & LMASK) )
#define TWIST(u,v) ((MIXBITS(u,v) >> 1) ^ ((v)&1UL ? MATRIX_A : 0UL))
```

```
static unsigned long state[N]; /* the array for the state vector  */
static int left = 1;
static int initf = 0;
static unsigned long *next;

/* initializes state[N] with a seed */
void init_genrand(unsigned long s)
{
    int j;
    state[0]= s & 0xffffffffUL;
    for (j=1; j<N; j++) {
        state[j] = (1812433253UL * (state[j-1] ^ (state[j-1] >> 30)) + j);
        /* See Knuth TAOCP Vol2. 3rd Ed. P.106 for multiplier. */
        /* In the previous versions, MSBs of the seed affect   */
        /* only MSBs of the array state[].                     */
        /* 2002/01/09 modified by Makoto Matsumoto             */
        state[j] &= 0xffffffffUL;  /* for >32 bit machines */
    }
    left = 1; initf = 1;
}

/* initialize by an array with array-length */
/* init_key is the array for initializing keys */
/* key_length is its length */
/* slight change for C++, 2004/2/26 */
void init_by_array(unsigned long init_key[], int key_length)
{
    int i, j, k;
    init_genrand(19650218UL);
    i=1; j=0;
    k = (N>key_length ? N : key_length);
    for (; k; k--) {
        state[i] = (state[i] ^ ((state[i-1] ^ (state[i-1] >> 30)) * 1664525UL))
          + init_key[j] + j; /* non linear */
        state[i] &= 0xffffffffUL; /* for WORDSIZE > 32 machines */
        i++; j++;
        if (i>=N) { state[0] = state[N-1]; i=1; }
        if (j>=key_length) j=0;
    }
    for (k=N-1; k; k--) {
        state[i] = (state[i] ^ ((state[i-1] ^ (state[i-1] >> 30)) * 1566083941UL))
          - i; /* non linear */
        state[i] &= 0xffffffffUL; /* for WORDSIZE > 32 machines */
        i++;
        if (i>=N) { state[0] = state[N-1]; i=1; }
    }

    state[0] = 0x80000000UL; /* MSB is 1; assuring non-zero initial array */
    left = 1; initf = 1;
}

static void next_state(void)
{
    unsigned long *p=state;
    int j;
```

```
    /* if init_genrand() has not been called, */
    /* a default initial seed is used         */
    if (initf==0) init_genrand(5489UL);

    left = N;
    next = state;

    for (j=N-M+1; --j; p++)
        *p = p[M] ^ TWIST(p[0], p[1]);

    for (j=M; --j; p++)
        *p = p[M-N] ^ TWIST(p[0], p[1]);

    *p = p[M-N] ^ TWIST(p[0], state[0]);
}

/* generates a random number on [0,0xffffffff]-interval */
unsigned long genrand_int32(void)
{
    unsigned long y;

    if (--left == 0) next_state();
    y = *next++;

    /* Tempering */
    y ^= (y >> 11);
    y ^= (y << 7) & 0x9d2c5680UL;
    y ^= (y << 15) & 0xefc60000UL;
    y ^= (y >> 18);

    return y;
}

/* generates a random number on [0,0x7fffffff]-interval */
long genrand_int31(void)
{
    unsigned long y;

    if (--left == 0) next_state();
    y = *next++;

    /* Tempering */
    y ^= (y >> 11);
    y ^= (y << 7) & 0x9d2c5680UL;
    y ^= (y << 15) & 0xefc60000UL;
    y ^= (y >> 18);

    return (long)(y>>1);
}

/* generates a random number on [0,1]-real-interval */
double genrand_real1(void)
{
    unsigned long y;

    if (--left == 0) next_state();
```

```
    y = *next++;

    /* Tempering */
    y ^= (y >> 11);
    y ^= (y << 7) & 0x9d2c5680UL;
    y ^= (y << 15) & 0xefc60000UL;
    y ^= (y >> 18);

    return (double)y * (1.0/4294967295.0);
    /* divided by 2^32-1 */
}

/* generates a random number on [0,1)-real-interval */
double genrand_real2(void)
{
    unsigned long y;

    if (--left == 0) next_state();
    y = *next++;

    /* Tempering */
    y ^= (y >> 11);
    y ^= (y << 7) & 0x9d2c5680UL;
    y ^= (y << 15) & 0xefc60000UL;
    y ^= (y >> 18);

    return (double)y * (1.0/4294967296.0);
    /* divided by 2^32 */
}

/* generates a random number on (0,1)-real-interval */
double genrand_real3(void)
{
    unsigned long y;

    if (--left == 0) next_state();
    y = *next++;

    /* Tempering */
    y ^= (y >> 11);
    y ^= (y << 7) & 0x9d2c5680UL;
    y ^= (y << 15) & 0xefc60000UL;
    y ^= (y >> 18);

    return ((double)y + 0.5) * (1.0/4294967296.0);
    /* divided by 2^32 */
}

/* generates a random number on [0,1) with 53-bit resolution*/
double genrand_res53(void)
{
    unsigned long a=genrand_int32()>>5, b=genrand_int32()>>6;
    return(a*67108864.0+b)*(1.0/9007199254740992.0);
}

int main(void)
```

```
{
    int i;
    unsigned long init[4]={0x123, 0x234, 0x345, 0x456}, length=4;
    init_by_array(init, length);
    /* This is an example of initializing by an array.       */
    /* You may use init_genrand(seed) with any 32bit integer */
    /* as a seed for a simpler initialization              */
    printf("1000 outputs of genrand_int32()\n");
    for (i=0; i<1000; i++) {
      printf("%10lu ", genrand_int32());
      if (i%5==4) printf("\n");
    }
    printf("\n1000 outputs of genrand_real2()\n");
    for (i=0; i<1000; i++) {
      printf("%10.8f ", genrand_real2());
      if (i%5==4) printf("\n");
    }

    return 0;
}
```

The generated unique data (which in this case are numbers), may be optionally filtered by another computer application which may delete numbers that were previously generated but has yet to be used as input by any user.

This filtering sub-routine is implemented electronically and controlled by the processor of the present invention.

The output of uniquely generated numbers may be either formatted or be left in a ASCII text file prior to transmission onto a manufacturing line controller for physical imprinting by suitable manufacturing devices that are also included within the overall manufacturing process involved with the production of the product that is slated for imprinting for the purposes of the present invention.

The generated numbers may be also simultaneously transmitted to another computer application to determine which of the said numbers are attached with a predetermined range of items (such as electronic access rights, electronic content, etc.)

The method by which the said numbers are attached to a range of items are largely determined by the operator of the present invention, or its agents, and may be subjected to commercial considerations rather than technical issues.

For example, there may be a total generated list of 100,000 numbers, of which 30% shall be

attached with the privilege of gaining access to an online gaming web-site, while 60% shall be attached with the right to download electronic content such as MP3 files from another vendor, with the remaining 10% being attached with the right to purchase a limited edition product and/or item

According to the sixth preferred embodiment of the present invention, unique generated data from the processor system shall be imprinted onto each designated product, which upon input of the said data by a user, allows the user to gain access to an internet web-site.

Upon gaining access to the said web-site, the user is presented with the option of selecting a choice of preferred online games to gain access to

Once the user selects and confirms the choice on the web-page, the processor will send the request to a designated server that is maintain or controlled by the operator of the online game as selected by the said user.

The user may be then asked to create an electronic identity for use within the said selected game.

The user can subsequently purchase identical products that contain unique data that can further purchase electronic items related to the user's selected gaming environment.

In the seventh preferred embodiment of the present invention, a electronic storage medium such as a compact disc (CD), digital versatile disc (DVD), containing a product in the form of electronic content may be embedded with an unique RFID tag containing a unique data that has been generated by a processor of the present invention.

The RFID tag may be embedded within the layer of material of the CD/DVD disc, or be attached onto a predetermined surface slightly depressed to ensure that the tag being glued to the depressed surface on the disc is flush with the rest of the disc's surface.

The RFID tag may also be deposited between the lacquer and graphic layer of the CD/DVD medium surface, or deposited directly on the lacquer layer and be sealed in place when the graphic layer is being applied to its surface.

The purchaser of the said product may therefore make use of the said RFID data embedded to

gain access to a predetermined web-site to further allow the purchaser to download additional electronic products such as MP3 tracks.

In this embodiment, the CD or DVD containing a software product, being embedded with a RFID tag, may be used by the purchaser of the product to gain access to a predetermined web-site to allow the purchaser to download software updates and/or additional products electronically provided by the vendor of the said product.

In the eight preferred embodiment of the present invention, liquid-based bottled products such as milk or fizzy beverages are imprinted with unique data being generated by a processor of the present invention, where the imprinting of such data may be in the form of numerals or a combination of numerals and alphabets on the inside surface of each seal or cap of the bottled product.

The purchaser of each bottled product will make use of the imprinted data as input to a predetermined web-site, which may be operated by the vendor or manufacturer of the bottled product, or an affiliated agent.

When the said data is used as input to the web-site, the purchaser is given a redemption of a product in electronic form, which can be utilized within another related web-site that is a internet-based computer game system.

The type of product that can be redeemed may be randomly selected, or be arranged such that a plurality of input of unique data by the purchaser of the product of the same will determine the item that can be redeemed by the purchaser.

In the ninth preferred embodiment of the present invention, the cap or seal of a bottled liquid-based product, such as beer, bottled water, wine, milk, cooking oil, sauces etc, is constructed of a single plastic material, further allowing a device assembly to be attached to its top inner area.

The device assembly will house a printed circuit board, further allowing a Light Emitting Diode (LED) to be soldered to the board, powered by a battery and additionally, houses a RFID tag containing unique data allowing the purchaser of the bottled product to make use of the unique data to gain access to a predetermined web-site, further allowing the web-site to provide the purchaser with items for redemption.

The function of the LED and battery assembly is to allow the cap to either blink or glow, further attracting focus and attention for a potential purchaser when the said product is being displayed on a shelf.

The LED and battery assembly may also function as a power source for the RFID tag embedded within the bottled product cap.

Modifications within the spirit and scope of the invention may readily be effected by persons skilled in the art. It is to be understood, therefore, that this invention is not limited to the particular embodiments described by way of example hereinabove.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method and apparatus for a processor to generate a series of unique data for transmittal to a imprinting device, allowing said device to imprint individual data onto suitable surfaces of a specific item, allowing the purchaser of the said item to make use of the unique data to gain access to a internet page to further allow the purchaser to interact with the operator of the said page

2. A method and apparatus as claimed in claim 1, where item containing unique data shall allow the purchaser of the said item to be authenticated prior to access to a predetermined internet page

3. A method and apparatus as claimed in claims 1 and 2, where said purchaser will be provided further internet pages once authentication is successful in order to electronically download a specified number of files

4. A method and apparatus as claimed in claims 1, 2 and 3, where said files shall be used by the purchaser for redemption of electronic items related to a specified internet-based computer gaming environment

5. A method and apparatus for a processor to generate a series of unique data for transmittal to a imprinting device, allowing said device to imprint individual data onto a suitable surface of a bottled water cap or seal, allowing the purchaser of the bottled water product to make use of the unique data to gain access to a internet page further allowing the purchaser to redeem a electronic unit related to a specified internet-based computer game system

6. A method and apparatus for a processor to generate a series of unique data for transmittal to a imprinting device, allowing the said device to imprint individual data onto a Radio Frequency Identification Device (RFID) unit, further embedding the RFID unit into a predetermined component or part of a specified product, allowing the purchaser of the said product to make use of the RFID unit for authentication to gain access to a internet page

7. A method and apparatus as claimed in claim 6, where RFID unit embedded within the product will allow the purchaser to gain access to a internet page using a supplied RFID reader, further allowing the purchaser to transact with the operator of the internet page

8. A method and apparatus for a processor to generate a series of unique data for transmittal to a imprinting device, allowing the said device to imprint individual data onto a Radio Frequency Identification Device (RFID) unit, further embedding the RFID unit onto the surface of a Compact Disc (CD) or Digital Versatile Disc (DVD) storage medium containing a software product, allowing the purchaser of the product to be authenticated using the said RFID unit for gaining access to a specified internet page

9. A method and apparatus as claimed in claim 8, where said RFID unit shall allow purchaser of the product to download files related to the purchased product once RFID authentication is completed

10. A method and apparatus as claimed in claims 8 and 9, where purchaser is required to use the RFID unit for authentication to a predetermined internet page, allowing the purchaser to download files enabling the CD or DVD storage medium to be utilized for installation of the contents stored on the said medium into a processor system used by the purchaser

11. A method and apparatus for processor to generate a series of unique data for transmittal to a imprinting device, allowing said device to imprint individual data onto a suitable surface of a liquid-based product cap or seal, allowing the purchaser of the product to make use of the

unique data to gain access to a internet page further allowing the purchaser to redeem a electronic unit related to a specified internet-based computer game system

12. A method and apparatus for processor to generate a series of unique data for transmittal to a imprinting device, allowing said device to imprint individual data onto a suitable surface of a bottled water cap or seal, allowing the purchaser of the bottled water product to make use of the unique data to gain access to a internet page further allowing the purchaser to redeem a electronic unit related to a specified internet-based computer game system

13. A method and apparatus as claimed in claim 12, where purchaser may repeatedly redeem additional electronic units which is recorded by the operator of the said internet page, allowing the purchaser to exchange a predetermined number of accumulated units for an item which further allows the purchaser to use the item during the participation and play of the specified internet-based computer game system

14. A method and apparatus for a processor to generate a series of unique data for transmittal to a imprinting device, allowing the said device to imprint individual data onto a Radio Frequency Identification Device (RFID) unit, further embedding the RFID unit into a predetermined component or part of a specified product, allowing the purchaser of the said product to make use of the RFID unit for authentication to gain access to a internet page

15. A method and apparatus as claimed in claim 14, where the said unique data is directly incorporated into an existing automobile key embedded with a RFID chip, allowing the purchaser to make use of the unique data via the RFID chip to gain access to a internet page once authentication is completed

16. A method and apparatus where a processor will generate unique data for imprinting onto the inner top surface of the cap or seal of a liquid-based product, allowing the purchaser of the product to make use of the unique data as input into a designated web-site, in exchange for redemption of a item for use during participation and play of a predetermined internet-based computer game system

17. A method and apparatus where a processor will generate unique data for imprinting onto the inner top surface of the cap or seal of a liquid-based product, allowing the purchaser of the product to make use of the unique data as input into a designated web-site

18. A method and apparatus as claimed in claim 17, where operator of the said web-site will record the number of unique data entered by the same purchaser, allowing the purchaser to exchange for redemption a item for use during participation and play of a predetermined internet-based computer game system once the recorded number exceeds a stored value

19. A method and apparatus as claimed in claims 17 and 18, where the operator of the web-site requires the purchaser to create an account prior to input and recording of unique data

20. A method and apparatus for a cap or seal of a liquid-based product to be constructed to allow for a LED, voltage source or dynamo, and a circuit board to be housed within the inner top area of the cap

21. A method and apparatus for a bottle cap to be constructed with an electrical circuit and a power source or dynamo, passing a current through a light emitting diode that is attached to the inner top area of the cap, allowing the cap to be illuminated by the diode

22. A method and apparatus for a bottled cap to be adapted to illuminate light by means of a circuit assembly housed within the inner top area of the cap, where the assembly is constructed with a circuit board, a voltage source or dynamo, a light emitting diode and a

inner seal isolating the entire assembly from the remaining inner area of the cap, further isolating the assembly from contact with the liquid contents of the completed bottle product

23. A method and apparatus for a circuit board containing a voltage source or dynamo, a light emitting diode to be housed within a assembly unit, said unit constructed to snap onto a specified portion of the cap of a bottled product

24. A method and apparatus as claimed in claims 20, 21, 22, and 23, where circuit board may further compose of a switch and capacitor

25. A method and apparatus as claimed in claims 20, 21, 22, 23 and 24, where circuit board may further compose of a switch, timer and capacitor

26. A method and apparatus as claimed in claims 20, 21, 22, 23, 24 and 25, where the assembly further houses a RFID tag and its related antenna coil

27. A method and apparatus for a processor to generate unique data, imprinting each unique data onto a RFID tag, embedding the RFID tag into a suitable component of a designated product, allowing the purchaser of the product to make use of the RFID tag and its imprinted unique data for authenticating between the purchaser's computer system and a designated operator web-site, further allowing the purchaser to gain access to a internet page once authentication is completed