Title: SYSTEM AND METHOD FOR MONITORING ENVIRONMENTAL IMPACTS OF PRODUCTS THROUGH MANUFACTURE, USE AND POST-USE

<table>
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<th>INPUT</th>
<th>USE</th>
<th>POST USE</th>
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Abstract: A method and system for obtaining environmental impact information about a specific product from the manufacturer, component providers, consumers and other knowledgeable parties and organizing the same into a universal ecotablet format including a unique identifier for the product which may be used by any member of the public to obtain the information for use in making a decision regarding purchase of the product.

Published: with international search report (Art. 21(3))
TITLE
SYSTEM AND METHOD FOR MONITORING ENVIRONMENTAL IMPACTS OF
PRODUCTS THROUGH MANUFACTURE, USE AND POST-USE

PRIORITY
This application claims priority to U.S. Provisional Application No. S.N. 61/609,550, filed March 12, 2012, the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION
FIELD OF THE INVENTION
The present invention generally relates to a system and methodology for evaluating consumer products and more specifically to provide a universal label to allow consumers to evaluate the environmental impact of a product through all phases of its manufacture, its use and its post use.

PRIOR ART
There has been much concern by the public generally concerning such items as carbon footprint tracking particularly as it is related to climate change as well as other societal disadvantages such as the use of disease causing chemicals, hazardous by-products and other environmental damage. Although such information is sought by the public the ability to provide the same is limited and is usually restricted to specific items such as the carbon footprint. For example, reference is hereby made to U.S. Patent Publications 2009/00164264, 2010/0001505, and 2010/0127868 which discuss methods and systems for carbon footprint or carbon value tracking and labeling. The closest prior art is that shown the U.S. Patent Publication 2010/0001505 which provides a label having a integer or a combination of an integer with an alphabet letter score or the like which would be available to the consumer as an indication of an analysis of the product with regard to various environmental factors including the impact of human activity on the natural world and would include climate change, greenhouse gas emissions, conservation of natural resources, organic materials, by-products, recycling and reuse, human health, humane treatment of living beings and corporate responsibility.

There is, however, no universal system applicable to track a product from its inception and manufacturing through its use and through the post use thereof which would be available to the public in the form of a single label on the product or through scanning a unique identifier on the product with a mobile device to allow producers and consumers to
distinguish products across multiple industries to thereby identify products that meet at least some elements of ecological goals.

SUMMARY OF THE INVENTION

A system for generating a Universal Ecolabel which includes means for allowing a product manufacturer to enter product specifications into a database, means for allowing a supplier of components for a product to enter information regarding the components into the database, means for allowing a consumer to enter data concerning the use of the product into the database, means for allowing the consumer, the manufacturer, or other knowledgeable parties, to enter post use data regarding the product into the database, means for compiling the information entered into the database and analyzing the same and printing a Universal Ecolabel containing a unique identifier to be associated with the product.

A method for providing a Universal Ecolabel for use by consumers of products including providing a database, entering information from the producer regarding the product into the database, entering information regarding the product from the consumer into the database, correlating the data and information entered to the database and providing a Universal Ecolabel including a unique identifier regarding the product, providing access to the public of the unique identifier and the information used to provide the Universal Ecolabel.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic diagram illustrating one form of a label format showing the various information to be collected regarding the environmental impact of a product;

Figure 2 is a schematic diagram of a Universal Ecolabel consumer use flow chart;

Figure 3 is a schematic diagram of a Universal Ecolabel supplier input flow chart;

Figure 4 is a schematic diagram illustrating information acquisition from a plurality of sources; and

Figure 5 is a schematic diagram illustrating the system for obtaining information about a product.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

While politicians continue to argue about the cause of global warming and environmental depredation, the public in virtually all nations believe that climate change induced by man's activities is real. Many feel a personal sense of responsibility and are willing to pay at least 10% more for environmentally friendly products. However, people also realize that the problems are complex, interactive and obvious solutions often wrong.
Since in most nations, consumer purchases represent almost 70% of Gross Domestic Product (GDP), tools that enhance consumer knowledge about appropriate environmental choices have the potential to facilitate change rapidly.

Ecolabelling has developed over the last twenty years as a means for consumers to identify products that meet at least some elements of a wide variety of ecological goals and to allow producers to better distinguish their product in the marketplace. These goals and standards vary significantly by product and the potential environmental impact of the product's inherent resource utilization, energy consumption and disposal cost with some factors considerably more important in one industry than in another. This has led to rather specific third party or industry sponsored certification which producers may solicit and receive to enhance their product's customer satisfaction demand. Hence, ecolabels currently provide little direct information on the product label but rather only an acknowledgement of certification.

The present invention is directed to a Universal Ecolabel (UE) format to assess the energy, matter, human component and packaging for any product or service during phases of production, use by consumer and post use. The standardized label format provides transparency, comprehensive analysis and a consistent format for presentation of all data. Inclusion of the information in a unique identifier form such as a barcode or SKU format for cell phone or home computer use provides the consumer with the potential to monitor his complete environmental "footprint" as well as to make purchase decisions. It additionally allows a method for producers and consumers to distinguish products across multiple industries including those from developing nations.

Referring now more specifically to Figure 1, the Universal Ecolabel format is composed of three vertical columns denoting any product/service resource utilization during input (manufacturing), consumer use and post use phases. Horizontal rows identify the materials, energy, specific human social components and packaging during each phase in sufficient detail so as to identify critical environmental impacts including greenhouse gas production, type of production energy used (nuclear, fossil fuel or renewable), potential for adverse impact of product or production methods on humans, animals, plants, water, air or ecosystems, compliance with UN recognized standards of labor practices, amount of production waste and waste water, use of recycled materials, distribution pathway to local consumers, consumer resource consumption during use, and similar elements during the post use phase including options to return product to manufacturer, recycle, reuse or dispose in
landfill. Packaging is also addressed but as a separate category since it is not an integral part of the product but does require resource utilization.

Adoption of a labeling process as outlined above has several important implications for rapidly accelerating the movement to sustainable industrial, agricultural and harvesting processes. First, by enhancing consumer knowledge of the environmental impact of products in a comprehensive transparent format, it will facilitate greater consumer participation in the sustainability movement. Next, it will move toward elimination of "green washing" often disguised with certification labels that emphasize one positive product element but overlook other more important negative ones. Third, when producers know that consumers are demonstrating concern for more than price, they will begin to focus on production methods that address sustainability issues. Fourth, petroleum based products will likely have significant detrimental "scores" that will stand out glaringly in contrast to those not using this resource. This will encourage producers to seek more renewable energy sources and non-petroleum based products facilitating preservation of these non-renewable resources for future generations. Fifth, if adopted by a major big box retailer for its suppliers, the store would maintain full product transparency and distinguish itself as a leader in the sustainability movement.

From the consumer perspective, by using a mobile device or a home computer application to scan all purchases, each consumer can monitor his/her environmental "footprint" in a comprehensive manner facilitating meaningful progressive reduction of the individual’s adverse environmental impact.

From a macroeconomic perspective, current accounting methods only monitor price presuming that resource scarcity or consumer preference will lead to price changes reflecting that scarcity or need. The universal ecolabel represents a parallel accounting system that actually tracks the real major material, energy and human components of goods and services. Since the planet only has a fixed amount of material and fossil fuel resources, monitoring them to be able to meet the needs of a growing population becomes more important. As resources become scarce, the label and personal monitoring become a tool society may even find more useful to base its taxation methods rather than personal income. The Universal Ecolabel represents a defining step toward resource monitoring and real world accounting that can operate parallel to our current monetary accounting practices.

Label Data Acquisition and Uses

Producers will receive digitally or by mail a series of questionnaires identifying the method for calculating each requested datum about a specific product for label incorporation.
Information will be transmitted electronically to the Universal Ecolabel facility or "cloud" and processed as outlined in the flow charts of Figures 3, 4 and 5. Producers and suppliers will have constant database access to update data as product resources and production methods are altered to reflect new practices. The Universal Ecolabel database will adjust label components concurrently with new received data.

On a macroeconomic scale, anonymous summaries of the cloud obtained data has a unique potential to influence planning agencies, demographic analyses and commerce to more efficiently meet people's needs for less. The label can provide a "real world" accounting tool complimentary to the monetary system and even a potential vehicle for taxation by use. Economists and other academicians may also find the summary information useful for analyzing events, trends and comparing with monetary information.

Universal Ecolabel Uses and Benefits

Provides a single uniform tool to document the materials, energy and specific social components of all goods and services from resource extraction through all phases of production, distribution, consumer use and post consumer fate.

A tool for each citizen to monitor his personal impact/utilization of resources in his personal life, his/her "personal ecological footprint".

By exposing the full cost of production impact, Universal Ecolabel eliminates the means to "green wash" or "externalize" production impacts resulting in an unfair competitive market advantage subsidized by taxpayers.

By removing hidden or externalized costs Universal Ecolabel will afford developing nations' products a more realistic and market driven competitive opportunity with developed nations' products.

Universal Ecolabel provides retailers an objective tool to compare the environmental impact of products facilitating their efforts to provide consumers with environmentally friendly choices at the stores.

By holding producers responsible for the sum of their supplier's environmental impact as reflected in the Universal Ecolabel Input column, producers will be more motivated to choose to purchase from suppliers who use environmentally friendly methods.

The Universal Ecolabel provides producers the ability to assess the environmental impact of their supply sources.

A format for macroeconomic monitoring of human impact on the resources of planet Earth.
A tool for real world resource flow accounting as an alternative to the monetary
accounting system that places equal value on all transactions without regard for impact on
humans or the planet.

A tool to facilitate taxation by use.

Referring now more specifically to Figure 1, the column labeled - Input - represents
all product components utilized to the point of placing the product on the retail shelf. The
column labeled - Use - represents all material and energy provided by the user during the life
of the product. An additional space is provided for a unique identifier for the product such as
a Barcode identifier or a SKU generated by the producer of the product. The column labeled
- Post Use - represents product disposition after the consumer has completed use or
consumption of the product. The row labeled - Matter - represents all materials used in the
product or in the production process as well as materials added by the consumer during use
and disposition of materials after end of consumer use. The row labeled - Energy -
represents all energy resources utilized during production, consumer use and after consumer
disposal including waste energy produced. The row labeled - Human - displays human
impact of product/production methods during production and after consumer use. Abbreviation
definitions are listed in the Key at the bottom of the label. The row labeled -
Packaging - represents materials, energy and human component utilized in packaging
production and post use disposal. The row labeled - Distribution - is a world map for
denoting all geographic areas of product source material/production, subassembly, final
assembly and point of distribution to the retailer.

The Matter Input Box contains six rows with the top two rows denoting the effects of
production methods of the product on humans, animals, plants, air, water and ecosystems
derived from many different sources. The third row denotes the percent of the final product
weight derived from recycled materials. The fourth row denotes the percent of the final
product weight derived from petroleum based materials. The fifth row denotes the total
gallons of waste water generated from all stages of production per unit of product. The sixth
row denotes the percent of the final product weight of unused or waste materials in all stages
of production and identifies if such materials were used in other products of more or less
complex nature than the final product.

The Energy Input Box contains five rows of information with the first row
designating the total energy used in production of the product by all assemblers represented
as Kilowatt hours of electricity or gallons of fossil fuel. Rows two, three and four represent
the energy sources as percent of total energy derived from fossil fuel, nuclear energy or
renewable energy sources. The fifth row denotes the total greenhouse gases released into the environment during all phases of production represented as tons of CO2 or other gases.

The Human Input Box contains three rows of information with row one denoting the producer's use of Forced Labor, Child Labor or Labor Unions in the manufacture of the product. Row two denotes the producer's use of Discriminatory labor practices, provision of Worker Safety and Living Wage while row three denotes fair Working Hours and Whistle Blower employee protection.

The Packaging Input Box contains six rows of information with row one denoting the source of materials from petrochemical, organic or inorganic sources used in packaging as percent of weight of total packaging materials. Row two denotes the total energy used in packaging material production designated as Kilowatt hours of electrical energy or gallons of fossil fuel. Row three denotes by percent energy from fossil fuel, nuclear or renewable sources. Rows four, five and six denote compliance with eight social responsibility factors by all manufacturers of product packaging with the abbreviations for these factors shown in the KEY at the bottom of the label.

The Input Distribution Map denotes all geographic areas of product source material/production, subassembly, final assembly and point of distribution.

The Consumer Use Matter Box contains six rows but only four rows of information with row one identifying all additional materials needed by the consumer during product use (may be more than one). Rows two and three identify the quantity of each material necessary for each product single use and during the expected lifetime of the product use. Row four denotes the quantity of water used by the customer per each single use of product in gallons.

The Consumer Use Energy Box contains four rows of information with rows one, two and three identifying the amount of energy consumed for a single product use in gallons of fossil fuel or Kilowatt hours and for life of product use. Rows four and five identify the percent of energy by fossil fuel, nuclear or renewable energy source. Row six identifies the amount of greenhouse gas produced during a single use and over lifetime of the product.

The Consumer Use Human Box is determined only by consumer preference.

The Consumer Use Barcode Space is a space where a unique identifier such as a Barcode (linear or two dimensional) or SKU generated by the manufacturer of the product or by Earth Accounting is used in conjunction with a cell phone or home computer software application to obtain the detailed product information from web site/cloud link including factors listed on the label as well as additional pertinent environmental impact information and similar information on other comparable products.
The Key includes the left two columns defining Human Code abbreviations used in the Human Input and Post Use and the Packaging Input portions of the label. The right two columns define the matter Adverse Effect Scale. This denotes a scoring code for assessing quality of evidence based on research for adverse effect determination. The last right row denotes Energy Units, defining conversion units for fossil fuel to Kilowatt hours of electricity.

The Post Use Matter Box includes six rows of information. Row one denotes if the product is biodegradable in less than three months (short term) or greater than three months (long term). Rows two and three identify the percent of product weight that is not biodegradable and the portion of that weight that can be recycled, returned to retailer/producer or reused by other customers. Row four denotes atmospheric emissions produced during product degradation. Row five denotes the quantity of waste water in gallons used in post use phase per unit of product. Row six denotes percent of product weight relegated to landfill or burned.

The Post Use Energy Box includes five rows of information. Row one denotes quantity of energy produced in Kilowatt hours when the product is decomposed or burned. Row two denotes quantity of greenhouse gases produced with disposal especially by burning. Row three identifies the total energy used during disposal in Kilowatt hours. Row four identifies the percentage of fossil fuel, nuclear or renewable energy utilized during disposal process as Kilowatt hours. Row five denotes the total greenhouse gases.

The Post Use Human Box includes four rows of information. Rows one, two and three show compliance with the social responsibility standards, as defined in the Key at the bottom of the label, by post use facility during the product disposal period. Row four denotes likely exposure of the local community to any adverse effects of disposal including odor, noise, ground water contamination, attraction of predators or disease as a zero to ten rating or such other rating as may be generated by use.

The Post Use Packaging Box includes five rows of information. Rows one and two identify percent of packaging waste that is biodegradable (short and long term). Rows three, four, five and six denote percent of the packaging weight that is reused, recycled, returned to source, burned or placed in landfill.

It should be understood by those skilled in the art that the label format which is illustrated in Figure 1 and above-described in detail with regard to the information which is contained therein could, under some circumstances, be printed out and applied directly to the product so that the consumer may, when deciding whether to purchase the product or not,
review the information printed on the label. However, with regard to most products, printing of such a label with all of the information as above outlined contained thereon and securing it to the product, would not be practical. As a result, it should be understood, and will be explained in greater detail herein below, that all of the information which is collected concerning a product and which is categorized into the various positions on the label format as above described, will be stored in the Universal Ecolabel Server. The unique identifier such as the Barcode or SKU or other particular unique identifier which is placed on the product by the manufacturer of the product can be scanned by a Smart Phone, iPad or similar such device and when such is done, the information contained on the label format and as above described in detail would appear on the Smart Phone, iPad or other device and could then be analyzed in detail by the consumer. Alternatively, if an SKU or other such unique identifier is utilized, that may be keyed into the Smart Phone, iPad or desktop computer or laptop computer and again the detailed information as above described and as illustrated in Figure 1 would appear for detailed analysis by the consumer.

As shown in Figure 2, consumers can create a personal preference profile to prioritize specific environmental elements most meaningful to them over others. Consumers uploading a home computer footprint monitoring program can maintain a continuous record of the environmental impact of their purchases. An affiliated website can be used to augment consumer influence on producers and allow producers to easily notify consumers of environmentally friendly product changes. Forums, blogs and webcasts can provide additional consumer desired services. The cell phone application will be continuously updated to reflect new production practices.

As is shown in Figure 2, the product 10 would have placed thereon the Universal Ecolabel unique identifier 12 which as shown in Figure 2 is in the form of a Barcode. The consumer in accordance with one embodiment of the present invention would utilize his or her Smart Phone, iPad or the like 14 to scan the Barcode 12. The Smart Phone 14 includes an application 16 which upon recognition of the Barcode communicates with the Universal Ecolabel Server 18. This can be done by communication through the cloud 20 or the internet depending upon the particular application. The communication would be accomplished by contacting the server application 22 which would then access the database 24 to retrieve the product environmental impact data which has been collected and organized in accordance with the label format as above described in detail with regard to Figure 1. Once that information has been obtained from the database, it would be retransmitted as shown at 26 through the cloud or the internet 20 to the Smart Phone 14 or other device in accordance with
filtering through a personal priority profile as indicated at 28. In this manner, the consumer through utilization of the unique identifier in the form of the Barcode 12 has access to all of the detailed information regarding the environmental impact of the particular product, thus enabling the consumer to make a decision as to whether to purchase the product or not in accordance with that consumer's personal preferences.

Alternatively, the Barcode 12 may be transmitted by the Smart Phone 14 to the consumer's home computer 30. The information for the home computer 30 may also be obtained by the consumer having the product 10 with the Barcode 12 thereon at home and scanning that Barcode directly into the computer equipment as shown by the arrow 32. When such is done, that information is then transmitted directly to the home computer 30 as illustrated at 34. In addition, assuming that the SKU is the unique identifier, the consumer may key that SKU into the home computer 30 to accomplish the same thing. When this occurs, the information as is scanned into the home computer 30, is transmitted as shown at 36 into the personal footprint software. When such occurs, communication is established as shown at 38 with the cloud 40 which then accesses the Universal Ecolabel Server application 22 to in turn access the Universal Ecolabel Database 24 to obtain all of the information regarding the particular product of concern. That environmental impact information is then transmitted back as shown by the arrow 42 through the cloud 40 to the personal footprint software and is then transmitted into the personal footprint database 44. This information is then combined with prior purchases which the consumer has made and all of the information is then utilized to update the personal footprint spreadsheet 46 to generate a total personal footprint regarding all prior purchases including the updated information with regard to the new purchase which has been made of the product 10. As can be seen with regard to the information as depicted in Figure 2, all of the environmental impact data which has been collected with regard to the particular product of concern has now been made available to the consumer and is combined in a personal footprint database along with the prior purchases of the consumer and in accordance with personal preferences as established by the consumer in order to inform the consumer and maintain the consumer in a position of having a completely updated personal footprint purchase information.

Referring now more particularly to Figure 3, there is an illustration of a portion of the system of the present invention for obtaining the Environmental Impact Information with regard to a product which is to be included within the labeled information as illustrated in Figure 1. As was indicated above, the manufacturer will receive either online or by mail questionnaires regarding the Environmental Impact Information with regard to a specific
product being made by that manufacturer. The manufacturer will respond to the required information by providing it as a response to the questionnaire by way of entering it onto the manufacturer's computer as shown at 50. That information is then transmitted as product specifications as a data entry item as shown at 52. That information is then transferred to the Product Component Database 54 in the Universal Ecolabel Server 56. In many instances the manufacturer will require his suppliers to provide information with regard to components of the product. Such is shown by the supplier 58 as Supplier 1 to any number of suppliers as shown at 60. All of the data regarding the components provided by these suppliers is then transmitted as shown at 62 to a batch input process 64 where all of this data is collected. That data in turn is then transmitted as shown at 66 to the Supplier Impact Database 68.

As indicated above in some instances the manufacturer 50 will also send a questionnaire to a supplier to require that supplier to provide the Environmental Impact Data with regard to components being provided by that supplier. The supplier will then generate a response to the questionnaire and input the same to the supplier's computer as shown at 70 and that information will be transmitted as shown at 72 to the web based supplier data entry 74 which in turn will be transmitted as shown at 66 to the Supplier Impact Database 68. The information thus collected by the batch input process 64 and the web based supplier data entry 74 is then collected in the Supplier Impact Database and is transmitted as shown at 76 to the Supplier Data Analyzer. The Supplier Data Analyzer also receives the product component information forwarded by the manufacturer to the Product Component Database 54 as is shown at 78. The thus collected information from the manufacturer and the suppliers of the various components after being appropriately analyzed is forwarded as shown at 80 to the Component Impact Inventory Database 82.

As above described, the consumer will generate Environmental Impact Data regarding the use of the product. That information can be entered into the consumer's computer as shown at 84 and transmitted into a consumer use data entry as shown at 86. The consumer will also generate Post-Use Environmental Impact Information and that can also be inserted into the consumer's computer 84 and transmitted to the Post-Use Data entry 88. The Consumer Use Impact Data is then transmitted as shown at 90 to the Consumer Use Database 92 while the Post-Use Impact Data 88 is transmitted as shown at 94 to the Post-Use Database 96.

All of the information regarding the component impact inventory, the consumer use and the post-use is then transmitted as shown at 98 to the Universal Ecolabel Database 100 where it is processed and then transmitted as shown at 102 to the Universal Ecolabel Output
104 and is then entered into the Universal Ecolabel 106 to provide the format label with the
information thereon as shown at Figure 1.

Referring now more particularly to Figure 4 there is illustrated an additional portion of the
system of the present invention in which a plurality of various organizations and parties may
participate in the process of providing environmental impact information regarding a
particular product. Such organizations would be, for example, sustainability activists and
organizations as shown at 110, other ecolabel organizations as shown at 112, possibility that
government agencies as shown at 114 may also have an interest and would have information
regarding the product and would participate in providing such Environmental Impact
Information, other companies and research organizations as shown at 116 who would have an
interest in the environmental impact of a particular product may participate as would retailers
as shown at 118. All of these organizations as shown at 110 through 118 would then provide
whatever information they may have as shown at 120 into an Impact Information Database
122. There may also be other knowledgeable parties as shown at 124 who upon receiving
information regarding a particular product as illustrated at 126 who may also then desire to
impart information which they have to the process database to round out the environmental
impact information with regard to that particular product. The various producers of the
product who include the manufacturers as described in conjunction with Figure 3 and as
shown at 128 would also provide the information that they have as shown at 130 into the
Impact Information Process Database. All of the information generated and modified by the
various organizations, knowledgeable parties, producers and the like would then be processed
and transmitted as shown at 132 to the Earth Accounting Product Database 134. Database
134 includes the information in the databases 68, 82, 92, 96 and 54 from Fig. 3. The
information in the database 134 would then be processed and provided as shown at 136 to the
ecolabel as shown at 138. As above described in conjunction with Figure 2, the information
on the label 138 could then be obtained by scanning by consumers and any other member of
the public who may have an interest as shown at 140. The consumer may then have
additional information which it desires to impart to the Impact Information Process Database
and such is illustrated at 142 and is then transmitted as shown at 144 to the Impact
Information Process Database 122 and would be used to further modify the Environmental
Impact Information to make it more complete and to update the information provided on the
Universal Ecolabel 138. As a result of this, the consumer may also be directed elsewhere as
is shown at 146.
Reference is now made more particularly to Figure 5. Figure 5 is an illustration of the overall system by which the various Environmental Impact Data is accumulated and inserted into the system for processing and ultimately into the database for utilization in generating the Universal Ecolabel. As is illustrated in Figure 5, the manufacturers and suppliers 150 will provide all of the environmental impact information in their possession with regard to the product and will transmit it as shown at 152 to a data input software and process 154. The various retailers 156 would also provide whatever information they have to the data input software and process as illustrated at 158. Various other knowledgeable parties as shown at 160 would also provide whatever information they have as shown at 162 so that it can be forwarded also to the data input software and process 154. The information from the consumers 164 would also be provided as shown at 168 to the data input software and process 154. As is illustrated, this transmission of the information may occur by way of the cloud 170 or alternatively the internet. All of the information provided to the data input software and process 154 is then processed according to the Environmental Impact Information regarding the product 172, the various components of the product as shown at 174, the information from the manufacturer and supplier as shown in 176, any recycler that may be involved as shown at 178, chemical components that may be involved as shown at 180 and the ecosystem which is shown at 182. All of this information is then transmitted into an analyzer 184 and further transmitted as shown at 186 to the output database 188. The information as thus processed and placed into the output database 188 is then utilized to complete the Universal Ecolabel 198 as above described. As is shown at 192 and above discussed in accordance with Figure 2, that information may then be obtained by scanning the unique identifier with the Smart Phone, iPad or other devices as shown at 192. The databases referred to above may use any structure currently known or which may be developed in the future such as relational databases, big data unstructured databases, or the like.

There has thus been disclosed a system and method whereby Environmental Impact Information regarding a particular product may be obtained, analyzed and placed in a label format which may then be accessed by the public through the utilization of a unique identifier which appears in the label format and on the particular product. The unique identifier could be in the form of a Barcode, an SKU or other unique identifier generated by the manufacturer of the product. When the unique identifier is scanned by a Smart Phone, iPad or other digital device, the Environmental Impact Information is made available to the interested party and may then be utilized by the interested party, such for example as a consumer to assist in making a decision as to whether or not to purchase and consume the product.
Claims:

1. A method for developing a universal ecolabel for a product comprising:
   a) obtaining from the producer of the product information regarding the potential environmental impact of producing the product, consuming the product and disposing of the product.
   b) obtaining from the consumer of the product information regarding the potential environmental impact of consuming the product and disposing of the product;
   c) obtaining from other knowledgeable parties information regarding the environmental impact of the product;
   d) storing the information obtained about the product in a database;
   e) processing the information into a label format to show the energy, matter and human component for the product during production, use by consumer and post use of the product;
   f) applying a unique identifier of the product to the label format for the specific product;
   g) providing access to the public of the unique identifier to influence purchase decisions of products; and
   h) providing access to the public of the information obtained regarding the product and used in generating the label format for the product.

2. A method as defined in Claim 1 wherein the step of obtaining information from the producer includes submitting a questionnaire to the producer to be completed with data regarding the product that will be included in the label format.

3. A method as defined in Claim 1 wherein the unique identifier is a bar code.

4. A method as defined in Claim 1 wherein the step of obtaining information from producers includes information from suppliers of components of the product to the producers.

5. A method as defined in Claim 1 wherein processing the information to show the energy includes all energy resources utilized during production of the product, during consumption of the product, and during disposal of the product including waste energy produced.

6. A method as defined in Claim 1 wherein processing the information to show human component includes forced labor, child labor, working hours, labor unions, worker safety, low wages, whistle blower protection and discrimination.
7. A method as defined in Claim 1 wherein processing the information to show matter includes recycled materials, petroleum based materials, wastewater generated, materials included but not fully used during production.

8. A method as defined in Claim 1 which further includes the step of receiving from the public further information about the product after the public members obtain access to the information used in generating the label format and revising the label format to include at least some of the information received from the public.

9. A method as defined in Claim 1 wherein the step of obtaining from the consumer product information regarding disposing of the product includes information regarding recycling, reusing or returning the product.

10. A method as defined in Claim 1 wherein the unique identifier is a SKU;

11. A method as defined in Claim 1 wherein providing access to the public includes loading of the unique identifier with a mobile device.

12. A method as defined in Claim 10 where providing access to the public includes entering the SKU into a computer.

13. A method as defined in Claim 1 wherein the step of obtaining information from other knowledgeable parties includes retailers.

14. A method as defined in Claim 1 wherein the step of obtaining information from other knowledgeable parties includes Government Agencies.

15. A method as defined in Claim 1 wherein the step of obtaining information from other knowledgeable parties includes sustainability activists and/or organizations.

16. A method as defined in Claim 1 wherein the step of obtaining information from other knowledgeable parties includes Ecolabel organizations.

17. A method as defined in Claim 1 wherein the step of obtaining information from other knowledgeable parties includes companies and research organizations.

18. A system for generating a universal ecolabel for a specific product comprising:
   a) a database;
   b) means for interconnecting the manufacturer of said product with the database to allow the manufacturer to enter environmental impact information regarding the product into the database;
c) means for interconnecting the consumer of the product with the database to allow the consumer of the product to enter environmental impact information regarding the use and post-use of the product into the database; and

d) means for processing the environmental impact information regarding the product into a label format including a unique identification for the product.

19. The system as defined in Claim 18 wherein the means for interconnecting the manufacturer of the product with the database includes suppliers of components of the product.

20. The system as defined in Claim 18 which further includes means for interconnecting other organizations with the database to allow said organizations to enter environmental impact information about the product into the database.
### INPUT

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<td></td>
<td>Waste Water (gal)</td>
<td></td>
<td>Waste water (gal/use):</td>
<td>Landfill or Burn (%wt):</td>
</tr>
<tr>
<td></td>
<td>Prod. Waste (%wt)</td>
<td></td>
<td>Upcycle Down</td>
<td></td>
</tr>
</tbody>
</table>

### ENERGY

<table>
<thead>
<tr>
<th></th>
<th>Total Kwh or gallons:</th>
<th>Kwh or gallons fuel:</th>
<th>Energy Produced (Kwh):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Fossil Fuel:</td>
<td>Per Use:</td>
<td>Gg Emissions:</td>
</tr>
<tr>
<td></td>
<td>% Nuclear:</td>
<td>Lifetimes:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% Renewable:</td>
<td>Energy Source:</td>
<td>Gg Emissions (tons):</td>
</tr>
<tr>
<td></td>
<td>Greenhouse Gas Emissions (Gg):</td>
<td>% Fossil Fuel: Nucl Renew:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(tons)</td>
<td>Gg emissions: Single Life</td>
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</tr>
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</table>

### HUMAN

<table>
<thead>
<tr>
<th></th>
<th>FL</th>
<th>CL</th>
<th>LU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disc</td>
<td>WS</td>
<td>LW</td>
<td></td>
</tr>
<tr>
<td>WH</td>
<td>WB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Determined by Consumer Choice)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PACKAGING

| Material(% Wt): Petro Org Inorg | Energy Total Kwh or gallons: | Energy (%): Ff Non Renew | Human: FL | CL | LU |
|---|-----------------|----------------|------------------|---|---|---|
| | | | Disc | WS | LW |
| | | | WH | WB |
| | Barcode Space |

### KEY

| Human Codes: | Matter Adverse Effect Scale: |
| FL = Forced Labor | A = Strong Evidence |
| LU = Labor Unions | B = Good Evidence |
| WS = Worker Safety | C = Possible Correlation |
| WB = Whale Bower | D = Low Probability |
| Y = Standard Met | E = No Evidence |
| N = Standard Met | F = Effect Unknown |

| (Refer to any Niemann of product in production methods) |
| ENERGY Unit: 1 gal gas = 15.5 Kwh |
INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 13/30460

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06Q 10/00 (2013.01)
USPC - 705/7.1.1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC: 705/7.1.1
IPC(8); G06Q 10/00 (2013.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 705/1.1; 705/7.1.1 (Keyword limited; terms below)
IPC(8); G06Q 10/00 (2013.01) (Keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase; Google (Scholar, Patents, Web)

Terms used: consumer product environmental impact label survey producer consumer production use disposal unique identifier barcode

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 2010/0274629 A1 (Walker et al.), 28 October 2010 (28.10.2010), entire document, especially Abstract; para [0012], [0021], [0025]-[0026], [0029]-[0033], [0035]-[0036], [0039], [0044]-[0045], [0051], [0053]</td>
<td>1-15, 17-20</td>
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<tr>
<td>Y</td>
<td>US 2011/0218885 A1 (Manski et al.), 08 September 2011 (08.09.2011), entire document, especially Abstract; Fig. 2AF</td>
<td>16</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

- Special categories of cited documents:
  - "A" document defining the general state of the art which is not considered to be of particular relevance
  - "E" earlier application or patent but published on or after the international filing date
  - "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  - "O" document referring to an oral disclosure, use, exhibition or other means
  - "P" document published prior to the international filing date but later than the priority date claimed

- Special categories of cited documents:
  - "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
  - "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
  - "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

Date of the actual completion of the international search
19 April 2013 (19.04.2013)

Date of mailing of the international search report
13 MAY 2013

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3290

Authorized officer: Lee W. Young
PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7776

Form PCT/ISA/210 (second sheet) (July 2009)