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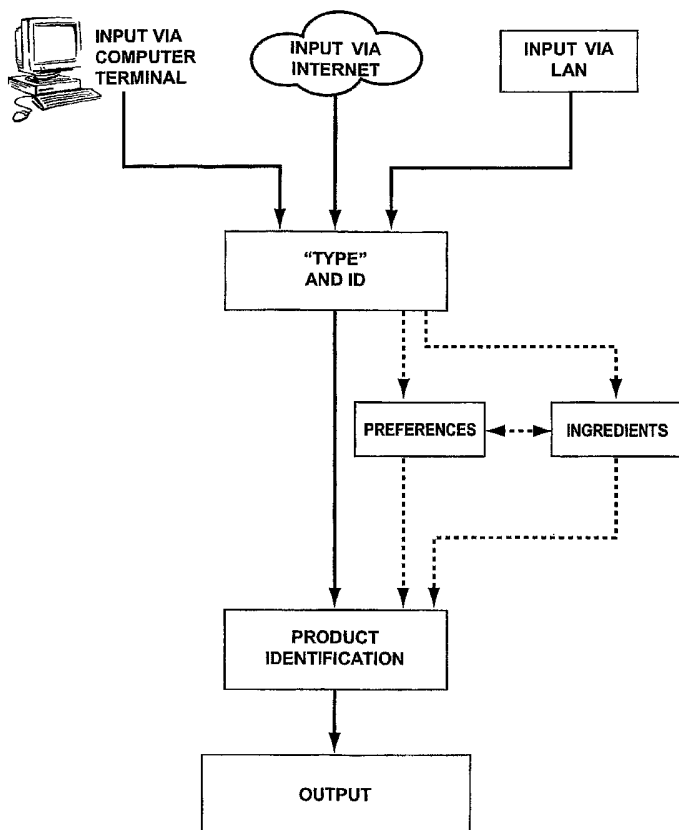
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(54) Title: METHOD OF DETERMINING SKIN TYPE, CHOOSING SKIN CARE PRODUCTS AND PROCEDURES AND PROMOTING SKIN CARE PRODUCTS



(57) Abstract: The invention comprises a system and method for assigning a skin type and/or hair type to an individual, where a preferred example is one of sixteen hair types and one of sixteen skin types. The hair or skin type score uses at least four factors related to the condition of the skin or hair, or a section of it. The invention also comprises using the hair type and skin type scores assigned to an individual to recommend or suggest certain skin and/or hair care products, as well as skin and/or hair care products that can be avoided. A preferred embodiment employs the skin or hair type in an online marketing, web-based sales network, or other computer-implemented or electronic interface, so that customers can use skin or hair type scores to receive information about products, ingredients, or to buy recommended products in a variety of ways.

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**METHOD OF DETERMINING SKIN TYPE, CHOOSING SKIN CARE
PRODUCTS AND PROCEDURES AND PROMOTING SKIN CARE
PRODUCTS**

Related Applications

[0001] This application claims the benefit of prior US provisional application 60/629,320, filed November 19, 2004, the entire contents of which are hereby incorporated by reference.

Field of the Invention

[0002] The invention relates to skin and/or hair care methods, products, treatments, and educational, promotional, and diagnostic methods concerning them and the analysis of skin and/or hair types. By employing a new classification scheme that better identifies the basis for skin and hair care treatments and the physiological and cellular differences between human skin and/or hair types, the invention provides advantageous results and leads to more informed cosmetic and skin and hair care decisions by professionals, consumers, or patients. In one aspect of the invention, patients, consumers, manufacturers, physicians, aestheticians, hair stylists, nurses and others can stratify an individual's skin or hair into 16 unique skin and/or hair types based on values assigned to at least four parameters. This results in 16 separate skin types and 16 separate hair types, referred to as Baumann Skin Type or Baumann Hair Type. The 16 different skin or hair types can be used to improve marketing and product and treatment recommendations.

Related Art and Background to the Invention

[0003] In order to promote skin and hair care products, many companies ask potential customers questions regarding their perception of their skin and hair. Based on the answers to these questions, cosmetic companies are able to better

suggest skin and hair care products. Examples of skin care promotions and these questions can be found on the Internet webpages of Neutrogena (neutrogena.com), L'Oreal (or L'Oreal website lorealparisusa.com), and Lancome (or Lancome website lancome.com). The answers to these questions, however, merely tell patients that their skin type is either dry, combination, sensitive, or oily. Similarly, hair care promotions that discuss hair types focus on fine, or curly, or color treated hair (*see* L'Oreal website at lorealparisusa.com). Some promotional efforts and websites, such as Pantene (website pantene.com), focus on a hair care objectives, for example increasing volume. In addition, many patent documents discuss questionnaires and testing methods in an attempt to categorize skin or hair, such as US patent publication 2004/0122299.

[0004] Each of these skin and hair care promotional efforts, as well as related websites and/or product literature that discusses skin and hair types, are limited to one or perhaps two parameters. As a result, the methods cannot effectively suggest or recommend products that address all of the skin and hair conditions that can exist.

[0005] In addition, there are two skin type classification systems that are currently used in the dermatology field. The first is based on the skin's reactivity to the sun and was developed by Fitzpatrick in 1963 (Fitzpatrick TB, Breathnach AS; Das Epidermal Melanin-Einheit System, *Dermatol Wochenschr* 147:481-489 (1963)). This grading scale is used universally but only takes into account the skin's pigmentation and reaction to sun exposure. More recently, a scale was developed to rank the degree of photodamage or skin aging caused by the sun. This "Glogau Photoaging scale" divides skin into 4 types according to

the amount of wrinkles that are present (Glogau, RG, Aesthetic and Anatomic Analysis of the Aging Skin, Semin Cutan Med Surg, 15(3):134-8 (1996)).

There are no widely accepted skin typing systems that take into account wrinkles, pigmentation, dryness and sensitivity. In addition, there are no widely used systems to type hair. Thus, the dermatology field is in need of improved methods for categorizing skin and hair types and recommending products for certain skin and hair types. There is, accordingly, a need in the art for more effective and more particular stratification of skin types and hair types as well as improved methods for determining the appropriateness of products for treating particular skin and hair.

SUMMARY AND DESCRIPTION OF THE INVENTION

[0006] In one aspect, the invention comprises a skin type scoring system and skin typing nomenclature that can involve a combination of: (i) a questionnaire to score skin for at least 4 factors or parameters; (ii) a list of 16 skin types based on the score in each of the four factors or parameters; and (iii) any other method that determines one of the four parameters, or a patient's self-perception of that parameter, to assign one of the 16 skin types. These 16 skin types can be used as an output for recommending personal care products and/or treatments that can be used to treat or care for skin having wrinkles, pigmentation, dryness and sensitivity, for example. In another aspect, the invention comprises a hair type scoring system and hair typing nomenclature that can involve a combination of: (i) a questionnaire to score hair for at least 4 factors or parameters; (ii) a list of 16 hair types based on the score in each of the four factors or parameters; and (iii) any other method that determines one of the four parameters, or a patient's self-perception of that parameter, to

assign one of the 16 hair types. These 16 hair types can be used as an output for recommending personal care products and/or treatments that can be used to treat or care for hair having chemical damage, a fine diameter, dryness and curls, for example. Thus, the invention allows patients, consumers, manufacturers, physicians, aestheticians, hair stylists, nurses and others to stratify skin or hair types into 16 unique skin and/or hair types based on values assigned to at least four parameters. In certain embodiments, this results in sixteen separate skin types and/or sixteen separate hair types, referred to as Baumann Skin Type or Baumann Hair Type.

[0007] While sixteen skin types are noted in particular and specifically here, the four factors or parameters may have a larger “score” range and, thus, instead of a being oily or dry (where the degree or score is one of two possible), the score or degree will depend upon the score on the questionnaire. For example, on the oily or dry portion of the questionnaire, the results may be oily1 or oily2 or dry1 or dry2 (totaling four different scores), for example. Furthermore, the number of parameters or factors can be increased over four. The number of possible scores or the range of scores for each of the four (or more) parameters or factors can depend on the input or answers to questions related to each of the parameters and the value of increasing the range of scores has in predicting an optimum skin care product or treatment or ingredient. If, for example, one of the available methods for analyzing a parameter is used and can produce results or input for that parameter that can increase the ability to differentiate between a recommended product and a neutral product or an unhelpful product or a contra-indicated product (“avoid” product), the score or range of scores can be selected and used in the invention.

[0008] The method of the invention can incorporate existing or any available method or technique for evaluating the four parameters including the enclosed questionnaire. Thus, the Glogau photoaging scale can be used for determining an aspect of the parameter involving wrinkles and the degree or score for that parameter can be associated with one of the four types identified by Glogau, or one of the six types of the Fitzpatrick-Pathak chart for sensitivity to sunlight. Many similar scales and scoring methods can be incorporated into the invention and its use for the wrinkled/tight factor and/or the sensitive/resistant parameter. In addition, each of the following references can be used to select a scoring system or method of inputting a score for a particular parameter in the methods of the invention, and each document is specifically incorporated by reference in its entirety and can be used and relied on to make specific embodiments of the invention: Baumann, *Cosmetic Dermatology: Principles and Practice*, McGraw-Hill (2002); Glogau, *Semin Cutan Med Surg* 15: 134-8 (1996); Glogau, J., *Geriatr Dermatol* 12:31 (1994); Armstrong, *et al.*, *Arch Dermatol* 128:390-3 (1992); Williams, *Arch Dermatol* 128:1406-7 (1992); Griffiths, *et al.*, *Arch Dermatol* 128:347-51 (1992); Holck, *Curr Opin Ophthalmol* 14:246-52 (2003); Perednia, *et al.*, *Arch Dermatol* 128:357-64 (1992). Other methods and techniques can also be selected and used.

[0009] In a particular embodiment, the invention comprises a method of identifying a skin care, hair care, or personal care product for a user or recommending a skin care, hair care or personal care product to a user, patient, or professional, wherein the skin or hair, or a portion or section of the skin or hair, of a patient is scored for at least four factors or parameters. For each factor, the score is compared to information on a group of skin care, hair care, or personal care

products, which information can be stored in electronic form, in a database, in a printed publication, in a chart, or in other medium. The information can be continually updated to enter new products or new characteristics of products. Examples of the information or characteristics for the products and/or treatments are specific indications that the product is designed to be used for dry skin, or oily skin, or that it contains allergens or compounds that users having sensitive skin should avoid, or that the product should not be used when the user will be exposed to the sun, or that the product tends to cause discoloration in certain skin, etc. The method can further comprise selecting at least one skin care product for the user and/or optionally recommending at least one product for purchase and/or recommending the use of that at least one product or a specific regimen for use and/or recommending that at least one product NOT be used or purchased. In the case of skin typing, the method can be further refined by using a particular set of parameters or factors, such as: 1) the degree of oily or dry skin present (O or D); 2) the degree of sensitive or resistant skin present (S or R); 3) the degree of pigmented or non-pigmented skin present (P or N); and 4) the degree of wrinkled or tight skin present (W or T). Thus, a particular user can be defined as having oily, sensitive, pigmented, and tight skin (OSPT) or any other of the sixteen possible combinations using these particular factors. The one of sixteen separate skin types that can be assigned to a user or patient can be referred to as the Baumann Skin Type. In the case of hair typing, the method can be further refined by using a particular set of parameters or factors, such as: 1) the degree of oily or dry hair present (O or D); 2) the degree of injured or uninjured hair present (I or U); 3) the degree of small diameter (fine) or large

diameter (thick) hair present (F or T); and 4) the degree of curly or straight hair present (C or S). Thus, a particular user can be defined as having dry, injured, fine, curly hair (DIFC) or any other of the sixteen possible combinations using these particular factors. The one of sixteen separate hair types that can be assigned to a user or patient can be referred to as the Baumann Hair Type. Thus, in one aspect of this embodiment of the invention, the method encompasses assigning one of sixteen Baumann Skin Types and/or Hair Types to a user or to a user's skin or hair or portion thereof. The information on cosmetic or skin or hair or personal care products, or the particular ingredients in those products, can then be used to recommend one or more products or treatments, or recommend against one or more products or treatments, for a particular skin type or condition characterized by a particular skin type. Similarly, a classification of sixteen hair types using these four parameters: dry or oily scalp; injured treated or non- injured treated; fine hair or thick hair; curly hair or straight hair.

[0010] Additional factors or parameters can be selected and used, or others substituted for those four listed above, but the four factors are preferred. If the four factors noted here are selected and used, the method can be further refined by assigning a range or score for each factor, so that, for example, factor 1) is a range from the integers 1-4 and a score of 1 in the oily to dry factor represents dry skin and a score of 4 represents oily whereas the integers in between represent lesser degrees of dryness or oiliness. Similarly, the score for factor 2) can be a range from the integers 1-4, so that, for example, a score of 1 in the sensitive to resistant factor represents sensitive and a score of 4 represents resistant, and the score for factor 3) is a range from the numbers 1-

4, so that, for example, a score of 1 in the pigmented or non-pigmented factor represents non-pigmented skin and a score of 4 represents pigmented skin, and the score for factor 4) is a range from the numbers 1-4, so that, for example, a score of 1 in the wrinkled or tight factor represents tight skin and a score of 4 represents wrinkled skin. Of course, other ranges can be selected, but in this example a 4X4X4 grid of the four factors and the score for each factor can be generated. Each place on the grid (for example O1:S1:P1:T1) can then be matched with a recommended product, treatment, ingredient, or combination of ingredients in the same or similar manner that the OSPT example from the sixteen skin type example above.

[0011] In another aspect of the invention, the method can operate on or as a computer-based or network system, such that, for example, the score for each factor and/or the input of the scores and patient or user information can be performed via a terminal or computer or through an access to an online network. Thus, a patient or user input in each of four parameters or factors, for example, gives rise to one or more recommendations in skin or personal care products or ingredients or combinations of ingredients or even treatments or uses of a product. In addition, the method can be used specifically to indicate, recommend, or suggest a particular skin care product, a cosmetic product, a cosmetic product for women, a cosmetic product for men, a cosmetic product for children or infants, a particular treatment for a skin disease or disorder, a hair care product, or a combination of any of these. The method can also be used in diagnosing a skin disease or disorder.

[0012] In another aspect, the collection or database of product and ingredient information can be stored electronically on the computer-based system or

network and accessed to provide output in recommending a personal care product or treatment regimen. The collection of information or data on products or treatments can focus on the product line of one particular company or producer, a group of companies or producers, a particular ingredient or combination of ingredients, or encompass many different companies or producers or ingredients or combinations. Furthermore, the information, or the output from the collected information or database, can be limited to those products available at a particular store or through a particular merchant or at a particular location or even to a particular country or region within a country. It can also be limited to those products or treatments that can be sold over-the-counter or used without professional guidance or direction or without a doctor's supervision.

[0013] As noted, in any embodiment of the invention the information about the products or treatments can be compiled in a list, chart, document or electronic database or accessible database. Each of the products or treatments and the method of using each of them can be categorized by one or more values according to the possible skin or hair types being used. Thus, for example, the record or datapoint for each product or treatment associated with a particular skin or hair type can also store information (or be linked to information or comments) for the user or queries to the user to further define the product, the user, or the skin type. Thus, in a general aspect, the invention allows an interactive computer-based or network system for determining a user's skin or hair type or the particular product or products to be recommended for that user.

- [0014] The data or information for each product can be sub-categorized by the ingredients in that product and/or by the function of the product or ingredient(s). Methods and techniques for determining the ingredients are known in the art and one can refer to texts (for example, *Cosmetic Analysis: Selective Methods and Techniques*, P. Bore, ed., C.H.I.P.S., 2005) in order to select such methods or techniques. Thus, certain products that contain certain ingredients or combinations of ingredients may be recommended or not recommended for a particular skin or hair type.
- [0015] In another embodiment, a questionnaire or series of questions can form the user or patient input in the method, which can be referred to as the Baumann Skin Type Questionnaire or the Baumann Hair Type Questionnaire. If the degree or score for a parameter or factor is between one of two possibilities, the questionnaire can essentially be a series of questions. Optionally, and especially if the degree or score for a parameter or factor is between more than one of two possibilities, the questions or queries can be a flow chart or set of questions or even an interactive set of questions, where a response to a question is followed by one or more questions to refine the answer or input for a particular factor or parameter. In addition, the input or answers to a question, set or questions, or a query as from an interactive network is the value from one of the analytical methods, available scaling systems, or techniques noted above, for example the Glogau photoaging scale.
- [0016] In addition, the invention can incorporate a patient or user (patient/customer) information collection step or process, where a user can save identifying information or a username to be retrieved or used later. The patient/customer information can include basic demographic queries and/or responses as well as

prior user sessions and/or recommendations. Systems and networks that utilize this patient/customer information or demographic information are well known in the art, as well as the methods for sequestering this personal information to protect the privacy of the user or patient or customer.

BRIEF DESCRIPTION OF THE FIGURES

[0017] Figure 1 depicts an exemplary system or method for receiving skin or hair type information input from a terminal, network, local area network, or via the internet, for example, identifying one or more products to be recommended and/or one or more products to be avoided based upon the skin or hair type, and creating an output based upon the products and the information about the products stored in the identifier. In optional embodiments, the output can be sent to a printer or screen for display by a potential customer or user. In addition, optional embodiments can associated a user ID for each individual customer or user, associate a user ID with that individual's skin or hair type, and store "Preferences" information on products or treatments that the particular user or the skin or hair type associated with that user finds appropriate or desirable. Thus, new products or products not already entered into the identifier can be added to the identifier along with the information concerning the skin or hair type. Also, an embodiment can correlate the ingredients of a product in the identifier and/or in the preferences with ingredients in an "Ingredient" database, so that new products with similar ingredients can also be recommended and/or avoided.

[0018] Figure 2 depicts a chart with sixteen exemplary skin types, Baumann Skin Type, as referred to above. Each of the letters represent one of the four factors or parameters - O (oily) or D (dry); S (sensitive) or R (resistant); P

(Pigmented) or N (non-pigmented); W (wrinkled) or T (tight). Based upon a scoring system or upon answers to a questionnaire, an individual can be assigned one of the sixteen skin types depicted in the combinations shown in Figure 2.

[0019] Figure 3 depicts a chart with sixteen exemplary hair types, Baumann Hair Type, as referred to above. Each of the letters represents one of the four factors or parameters - O (oily) or D (dry) hair; I (injured) or U (uninjured) hair; F (small or fine diameter) or T (large or thick diameter) hair; C (curly) or S (straight) hair. Based upon a scoring system or upon answers to a questionnaire, an individual can be assigned one of the sixteen hair types depicted in the combinations shown in Figure 3.

[0020] Figure 4 depicts an exemplary operation of the input and output options available in certain embodiments of the invention but the figure is not intended to encompass all possible embodiments. The optional patient/customer information can be collected first and then stored in a separate database or any database. In an option where four factors or parameters are selected, answers to questions or other inputs related to each of the four parameters or factors determine the score or degree for that factor (for example O or D as mentioned above). The arrows in both directions indicate that questions can be designed to refine the degree or score for that parameter by requiring more than one response or more than one input. The dotted line arrows indicate that information concerning the products or ingredients or combinations of ingredients can be used to help refine the score or degree in any or all or any combination of factors, if desired. Thus, oily skin with an allergy to certain compounds can result in different questions or queries being sent to the user or

patient or customer and the different questions may be further changed by the presence of certain products or ingredients in the database that may or may not be recommended. After the four factors have adequate input, a recommendation on a product, an ingredient, a combination of ingredients, or a treatment is made. A recommendation can include a suggestion to NOT use a particular product or ingredient as well as a suggestion to use a particular product or ingredient. This is generally referred to as the output recommendation, which optionally can be stored along with the query session in a separate database or associated with a database or stored with the patient/customer information. In another embodiment, the questionnaire incorporates information that is related to the input or response for a parameter or a factor or is perhaps related to more than one parameter or factor. For example, the questionnaire can include using questions related to a patient's or customer's age, habits such as diet and smoking, skin coloration, dryness, oiliness, sensitivity to compounds or abrasion, sunburn susceptibility, pimple breakout affinity, degree of wrinkle formation, and pore size. Depending on the responses, different questions may be asked or a particular subset of the possible skin types will be eliminated or selected, for example. Thus, as is shown in Figure 4, the responses to questions or input for any particular factor may also affect the degree or score in another parameter or factor (shown in the interaction through the database at the bottom).

DETAILED DESCRIPTION

[0021] In one aspect, the invention provides a solution to the problem of selecting, recommending, or categorizing skin or hair care products so that professionals,

patients or consumers can more accurately or more appropriately select or make recommendations on products that will improve hair or skin. By assigning a skin type or hair type, especially the skin or hair types of Figures 2 or 3, products can be matched to an individual's skin or hair in ways that prevent undesirable effects and/or improve various conditions in the skin or hair.

[0022] In one example, the invention comprises a method of assigning one of sixteen skin types to a potential skin care customer or personal care product user that comprises scoring the skin or a portion of the skin of the customer or user for at least four factors: 1) the degree of oily or dry skin present; 2) the degree of sensitive or resistant skin present; 3) the degree of pigmented or non-pigmented skin present; and 4) the degree of wrinkled or tight skin present. The degree of skin present for each of the factors 1) through 4) can be an either or (i.e., either oily or dry, or either sensitive or resistant), so that each factor has one of two values or scores. However, the score or values can be more than one of two options. Similarly, the invention comprises a method of assigning one of sixteen hair types to a potential hair care customer or personal care product user, comprising scoring the hair of the customer or user for at least four factors: a first factor reflecting the degree of oily (O) or dry (D) hair present; a second factor representing the degree of injured (I) or uninjured (U) hair present; a third factor representing the degree of small diameter or fine (F) hair or large diameter or thick (T) hair present; and a fourth factor representing the degree of curly (C) or straight (S) hair present. The skin types of Figure 2 and hair types of Figure 3 reflect four factors where each factor has one of two possible values or scores, and this is the preferred

method for scoring skin and hair. A questionnaire can be used to determine which of the two values or scores for each factor is appropriate, and an exemplary questionnaire is presented in the Appendix Table 2. A similar questionnaire can be developed for hair type factors, and the results used to select one of the sixteen hair types in Figure 3.

[0023] In another embodiment, the skin type or hair can be used in a method of recommending a skin care or hair care product to a potential customer. The method can employ an online or computer-based system to input a skin type or hair type, such as one of those shown in Figures 2 and 3. The online or computer-based system can then display or communicate one or more products recommended for that skin or hair type, or one or more products having an ingredient that is recommended for the particular skin or hair type. The system can store and routinely update the products that are recommended or should be avoided for each of the hair and skin types. A database or computer-based list of ingredients can also be used, where optionally each product is linked or associated with information on ingredients contained within the product. In one example, one or more products are recommended based upon information about a plurality of skin care products and their one or more ingredients that includes a "recommend" indication associated with a particular skin type.

[0024] In another aspect, the invention comprises a questionnaire for assigning one of sixteen skin types or hair types to a person or a section of the person's skin or hair. For the skin type example, the questionnaire comprises questions designed to determine four factors, such as whether oily (O) or dry (D) skin is present, whether sensitive (S) or resistant (R) skin is present, whether

pigmented (P) or non-pigmented (N) skin is present, and whether wrinkled (W) or tight (T) skin is present. In the related hair type embodiment, the questionnaire is designed to determine four factors, such as whether oily (O) or dry (D) hair is present, whether injured (I) or uninjured (U) hair is present, whether small diameter or fine (F) hair or large diameter or thick (T) hair is present, and whether curly (C) or straight (S) hair is present. The questionnaire can be presented in paper form, in an online format, or through an electronic device or computer-based system. In one example, the system for identifying a hair or skin care product can comprise an interface for receiving a skin or hair type for an individual, wherein a value or score for at least four factors related to the condition of the skin or hair is used. A computer or network can use a product identifier that compares the skin or hair type to stored information on a set of skin or hair care products or ingredients, wherein the information on a set of products includes for each product or ingredient one or more of: an "avoid" indicator for a particular skin or hair type; a "recommend" indicator for a particular skin or hair type; a "neutral" indicator for a particular skin or hair type. As known in the art, an output interface for displaying or communicating information on the skin or a hair care product identified can be used.

[0025] For an online seller of cosmetic or skin or hair care products, the systems and methods of the invention can provide superior suggestions to potential customers and generate improved customer loyalty. Furthermore, it can provide a basis for generating a database, and an updateable database, of preferred products for particular skin or hair types. Thus, not only can the systems and methods used stored information and skin or hair type scores to

make a product recommendation, the systems and methods can provide user comments related to the use of certain products for certain skin and hair types. One of skill in the art of online marketing and web-based sales is familiar with the user or customer ID options to associate a particular user with the information entered by that user, thus linking a satisfied user of a product to a particular skin or hair type.

EXAMPLES

[0026] A questionnaire can be used to generate a score or skin or hair type score for an individual. Such a questionnaire can be employed in many forms, including online forms, through network interfaces, brochures, telephone responses, or other forms. In the appendix Table 2, for example, on the oily vs dry portion of the questionnaire, a score of 11 to 44 is possible, with a score between 34- 44 representing very oily skin, a score between 27-33 representing slightly oily skin, a score between 17-26 representing slightly dry skin, and a score between 11- 16 representing dry skin. Similarly, the other factors can generate numbers in order to assign a score or value for a factor in other skin type factors and hair type factors. Thus, an O or D score can be used, or a score of one of O1 or O2 plus a score of one of D1 or D2 can be used.

[0027] For individuals assigned an oily (O) value or score for the oily vs. dry factor in the skin type scoring system, where the factor is only one of two options O or D, the system and method would recommend using a product with benzoyl peroxide, retinol, salicylic acid (or BHA), tea tree oil, and/or zinc for reducing acne. In addition, the ingredients to avoid for the individual with oily skin could be communicated as cinnamon oil, cocoa butter, cocos nucifera (coconut

oil), isopropyl isostearate, isopropyl myristate, peppermint oil, and sodium laurel sulfate. For the individual that in addition has sensitive (S) skin, the system or method could recommend products with: aloe vera, arnica, calendula, chamomille, colloidal oatmeal, cucumber, dexapanthenol, evening primrose oil, feverfew, green tea, licochalone, perilla leaf extract, pycnogenol (pine bark extract, red algae, trifolium pretense (red clover), thyme, epilobium angustifolium (willow herb), and zinc for reducing inflammation. For the individual that in addition has pigmented (P) skin, products with ingredients arbutin, bearberry extract, cucumber, glycyrrhiza glabra (licorice extract), hydroquinone, mulberry extract, and niacinamide can be used to lighten dark spots. For the individual that in addition has wrinkled (W) skin, products with the following ingredients can be used to prevent wrinkles: alpha lipoic acid, basil, caffeine, carrot extract, copper peptide, coenzyme Q10, cucumber, cucumin (tetrahydracucumin or tumeric), ferulic acid, feverfew, ginger, ginseng, grape seed extract, green tea, idebenone, luten, lycopene, pomegranate, pycnogenol, red clover, rosemary, sulymarin, and yucca. In addition, products to avoid for preventing further pigmentation and wrinkling include those with: avobenzene, benzophenones, methoxycinnamate, para aminobenzoic acid (PABA). Using these “recommend” and “avoid” indicators as an example, any product can be stored along with its ingredients and then compared to a list of ingredients recommended or that should be avoided for a particular skin type. In this way, new products that have not been specifically tested on a particular skin type, or for which no user information is available, can be coded for an indicator as “recommend” “avoid” or “neutral” based solely on the ingredient information. As noted

above, one or more of “recommend” or “avoid” or “neutral” indicators can be used in any of the aspects of the invention. The Table 1 list of ingredients is an example of the number of ingredients that could be used in a stored system or network for these and related purposes. Each ingredient can also be electronically linked to or associated with one or more products that contains the ingredient, especially if the amount is likely to or sufficient to cause some effect on skin or hair. Similarly, a large number of product types can be employed in any aspect of the invention, including cleansing or washing products, toner products, facial products, body products, makeup products, sunscreen products, moisturizing products, and the like, and each can be addressed in the methods and systems of the invention.

[0028] As another example, hair care products can be associated with the ingredients listed in Table 1 and then stored to recommend or avoid indicators for each of the hair types.

[0029] The invention is not limited to any particular embodiment or example given here. Instead, one of skill in the art can use the information and concepts described to devise many other embodiments beyond those given specifically here. In addition, the examples given and embodiments described should not be taken as a limitation to the scope of the claims that follow, and one of skill in the art can use the invention described herein to make and use embodiments that are not specifically described here.

CLAIMS

What is claimed is:

1. A method of identifying a skin care product comprising scoring a person's skin or a section of skin for at least four factors to generate an individual's skin type, wherein the at least four factors of the skin type comprise a first factor representing the degree of oily or dry skin present, a second factor representing the degree of sensitive or resistant skin present, a third factor representing the degree of pigmented or non-pigmented skin present, and a fourth factor representing the degree of wrinkled or tight skin present, and identifying at least one skin care product that is recommended for use on the person's skin or identifying at least one skin care product that should be avoided for the person's skin by comparing product information on a set of skin care products or ingredients of the products in the set of skin care products, wherein the product information comprises one or more of:
 - an indicator for one or more particular products or ingredients that at least one skin type should avoid the product;
 - an indicator for one or more particular products that at least one skin type should use the product;
 - a subset of products that are recommended for a particular skin type; and/or
 - a subset of products that should be avoided for a particular skin type.
2. The method of claim 1, wherein the product information comprises skin care products for one or more of facial care, body care, sunscreen, makeup, toner, moisturizer, or cleansing or washing.
3. The method of claim 1, wherein four factors are used and the skin type generated is one of sixteen skin types as shown in Figure 2.
4. The method of claim 1, wherein the skin care product is a washing or cleansing product.
5. The method of claim 3, wherein the skin care product is a washing or cleansing product.
6. The method of claim 1, wherein the skin care product is a facial care product.
7. The method of claim 3, wherein the skin care product is a facial care product.
8. The method of claim 1, wherein the skin care product is a body care product.
9. The method of claim 3, wherein the skin care product is a body care product.
10. A system for identifying a skin care product comprising

an interface for receiving a skin type for an individual's skin or a section of skin, wherein the skin type comprises a value for at least four factors related to the condition of the skin,

a computer or network comprising a product identifier that compares the skin type to stored information on a set of skin care products or ingredients of skin care products, wherein the information on a set of products includes for each product or ingredient one or more of: an avoid indicator for a particular skin type; a recommend indicator for a particular skin type; a neutral indicator for a particular skin type,

an output interface for displaying or communicating information for identifying a skin care product.

11. The system of claim 10, wherein scoring the skin or a section of the skin comprises: 1) a first factor reflecting the degree of oily (O) or dry (D) skin present; 2) a second factor representing the degree of sensitive (S) or resistant (R) skin present; 3) a third factor representing the degree of pigmented (P) or non-pigmented (N) skin present; and 4) a fourth factor representing the degree of wrinkled (W) or tight (T) skin present.

12. The system of claim 11, wherein four factors are used and the skin type generated is one of sixteen skin types.

13. The system of claim 10, wherein the skin care product is a washing or cleansing product.

14. The system of claim 12, wherein the skin care product is a washing or cleansing product.

15. The system of claim 10, wherein the skin care product is a moisturizer product.

16. The system of claim 12, wherein the skin care product is a moisturizer product.

17. The system of claim 10, wherein the skin care product is a makeup product.

18. The system of claim 12, wherein the skin care product is a makeup product.

19. A method of categorizing skin care products comprising receiving information that assigns a product as a particular type of skin care product and a "recommend" or "avoid" or "neutral" indication for each of sixteen different skin types, wherein the skin type comprises a first factor reflecting the degree of oily (O) or dry (D) skin present, a second factor representing the degree of sensitive (S) or resistant (R) skin present, a third factor representing the degree of

pigmented (P) or non-pigmented (N) skin present, and a fourth factor representing the degree of wrinkled (W) or tight (T) skin present, and

collecting one or more products that are assigned “recommend” or “avoid” for a particular skin type and type of skin care product.

20. The method of claim 19, wherein each product is assigned a “recommend” or “avoid” or “neutral” indication based upon one or more ingredients of the product, and the ingredients are assigned “recommend” or “avoid” or “neutral” for each of sixteen different skin types and particular use of the product.

21. The method of claim 19, wherein the products are further categorized into one or more of the particular skin care products: cleansing or washing products; moisturizing products; makeup products; and sunscreen products.

22. The method of claim 20, wherein the products are further categorized into one or more of the particular skin care products: cleansing or washing products; moisturizing products; makeup products; and sunscreen products.

23. The method of claim 19, further comprising displaying or communicating one or more recommend or avoid skin care products for any one skin type.

24. The method of claim 20, further comprising displaying or communicating one or more recommend or avoid skin care products for any one skin type.

25. A method of assigning one of sixteen skin types to a potential skin care customer or personal care product user, comprising scoring the skin or a portion of the skin of the customer or user for at least four factors: 1) the degree of oily or dry skin present; 2) the degree of sensitive or resistant skin present; 3) the degree of pigmented or non-pigmented skin present; and 4) the degree of wrinkled or tight skin present.

26. The method of claim 25, wherein the score for each factor is determined by the customer or user responses to a questionnaire.

27. The method of claim 26, wherein the questionnaire includes a set of questions for each of four factors, and the answers to each question determines one of: the degree of oily or dry skin present; the degree of sensitive or resistant skin present; the degree of pigmented or non-pigmented skin present; or the degree of wrinkled or tight skin present.

28. The method of claim 27, wherein the sixteen skin types are those depicted in Figure 2.

29. A method of recommending a skin care or personal care product to a potential customer comprising using the skin type assigned in the method of claim 25, and

displaying or communicating one or more products having an ingredient that is recommended for the particular skin type, wherein the one or more products are recommended based upon information about a plurality of skin care products and their one or more ingredients that includes a “recommend” indication associated with a particular skin type.

30. A method of recommending a skin care or personal care product to a potential customer comprising using the skin type assigned in the method of claim 27, and displaying or communicating one or more products having an ingredient that is recommended for the particular skin type, wherein the one or more products are recommended based upon information about a plurality of skin care products and their one or more ingredients that includes a “recommend” indication associated with a particular skin type.

31. A questionnaire for assigning one of sixteen skin types to a person comprising questions designed to determine four factors: 1) whether oily (O) or dry (D) skin is present; 2) whether sensitive (S) or resistant (R) skin is present; 3) whether pigmented (P) or non-pigmented (N) skin is present; and 4) whether wrinkled (W) or tight (T) skin is present.

32. The questionnaire of claim 31, where the questions are asked in paper form, in an online format, or through an electronic device.

33. A system for identifying a hair care product comprising
an interface for receiving a skin type for an individual's hair, wherein the hair type comprises a value for at least four factors related to the condition of the hair,
a computer or network comprising a product identifier that compares the hair type to stored information on a set of hair care products or ingredients of hair care products, wherein the information on a set of products includes for each product or ingredient one or more of: an avoid indicator for a particular hair type; a recommend indicator for a particular hair type; a neutral indicator for a particular hair type,
an output interface for displaying or communicating information for identifying a hair care product.

34. The system of claim 33, wherein scoring the hair comprises: 1) a first factor reflecting the degree of oily or dry hair present; 2) a second factor representing the degree of injured or uninjured hair present; 3) a third factor representing the degree of

small diameter or large diameter hair present; and 4) a fourth factor representing the degree of curly or straight hair present.

35. The system of claim 33, wherein four factors are used and the hair type generated is one of sixteen hair types.

36. The system of claim 33, wherein the hair care product is a washing or cleansing product.

37. The system of claim 35, wherein the hair care product is a washing or cleansing product.

38. The system of claim 33, wherein the hair care product is a conditioner.

39. The system of claim 35, wherein the hair care product is a conditioner.

40. A method of categorizing hair care products comprising receiving information that assigns a product as a particular type of hair care product and a "recommend" or "avoid" or "neutral" indication for each of sixteen different hair types, wherein the hair type comprises a first factor reflecting the degree of oily (O) or dry (D) hair present, a second factor representing the degree of injured (I) or uninjured (U) hair present, a third factor representing the degree of small diameter or fine (F) hair or large diameter or thick (T) hair present, and a fourth factor representing the degree of curly (C) or straight (S) hair present, and

collecting one or more products that are assigned "recommend" or "avoid" for a particular skin type and type of skin care product.

41. The method of claim 40, wherein each product is assigned a "recommend" or "avoid" or "neutral" indication based upon one or more ingredients of the product, and the ingredients are assigned "recommend" or "avoid" or "neutral" for each of sixteen different hair types and particular use for the product.

42. The method of claim 40, wherein the products are further categorized into one or more of the particular hair care products: cleansing or washing products; conditioning products; and styling products.

43. The method of claim 41, wherein the products are further categorized into one or more of the particular hair care products: cleansing or washing products; conditioning products; and styling products.

44. The method of claim 40, further comprising displaying or communicating one or more recommend or avoid hair care products for any one hair type.

45. The method of claim 41, further comprising displaying or communicating one or more recommend or avoid hair care products for any one hair type.

46. A method of assigning one of sixteen hair types to a potential hair care customer or personal care product user, comprising scoring the hair of the customer or user for at least four factors: a first factor reflecting the degree of oily (O) or dry (D) hair present; a second factor representing the degree of injured (I) or uninjured (U) hair present; a third factor representing the degree of small diameter or fine (F) hair or large diameter or thick (T) hair present; and a fourth factor representing the degree of curly (C) or straight (S) hair present.

47. The method of claim 46, wherein the score for each factor is determined by the customer or user responses to a questionnaire.

48. The method of claim 47, wherein the questionnaire includes a set of questions for each of four factors, and the answers to each question determines one of: the degree of oily or dry hair present; the degree of injured or uninjured hair present; the degree of small diameter or fine hair or large diameter or thick hair present; or the degree of curly or straight hair present.

49. The method of claim 46, wherein the sixteen hair types are those depicted in Figure 3.

50. A method of identifying a skin care product comprising scoring a person's skin or a section of skin for at least four factors to generate an individual's skin type,

using a database to compare the individual's skin type to information on a plurality of skin care products, and

identifying at least one skin care product that is recommended for use with the individual's skin type or identifying at least one skin care product that should be avoided for the individual skin type,

wherein the database comprises a plurality of data records, wherein each data record contains at least:

product identification information to identify one of the plurality of skin care products; and

compatibility information to indicate a degree to which the particular one of the skin care products is compatible with one or more skin types.

51. The method of claim 50, wherein the compatibility information indicates that the particular one of skin care products is not recommended for use with one or more skin types.

52. The method of claim 50, wherein the compatibility information indicates that the particular one of the skin care products is recommended for use with one or more skin types.

53. The method of claim 50, wherein the scoring step comprises: scoring a person's skin or a section of skin to generate an individual's skin type comprising at least the following four factors: 1) a first factor reflecting a degree of oiliness; 2) a second factor reflecting a degree of skin sensitivity; 3) a third factor reflecting a degree of pigmentation; and 4) a fourth factor reflecting a degree of wrinkledness.

54. The method of claim 50, wherein the database and compatibility information contains information on the ingredients of skin care products.

55. A method of identifying a hair care product comprising scoring a person's hair or a section of hair for at least four factors to generate an individual's hair type, using a database to compare the individual's hair type to information on a plurality of hair care products, and identifying at least one hair care product that is recommended for use with the individual's hair type or identifying at least one hair care product that should be avoided for the individual hair type, wherein the database comprises a plurality of data records, wherein each data record contains at least: product identification information to identify one of the plurality of hair care products; and compatibility information to indicate a degree to which the particular one of the hair care products is compatible with one or more hair types.

56. The method of claim 55, wherein the compatibility information indicates that the particular one of hair care products is not recommended for use with one or more hair types.

57. The method of claim 55, wherein the compatibility information indicates that the particular one of the hair care products is recommended for use with one or more hair types.

58. The method of claim 55, wherein the database and compatibility information contains information on the ingredients of hair care products.

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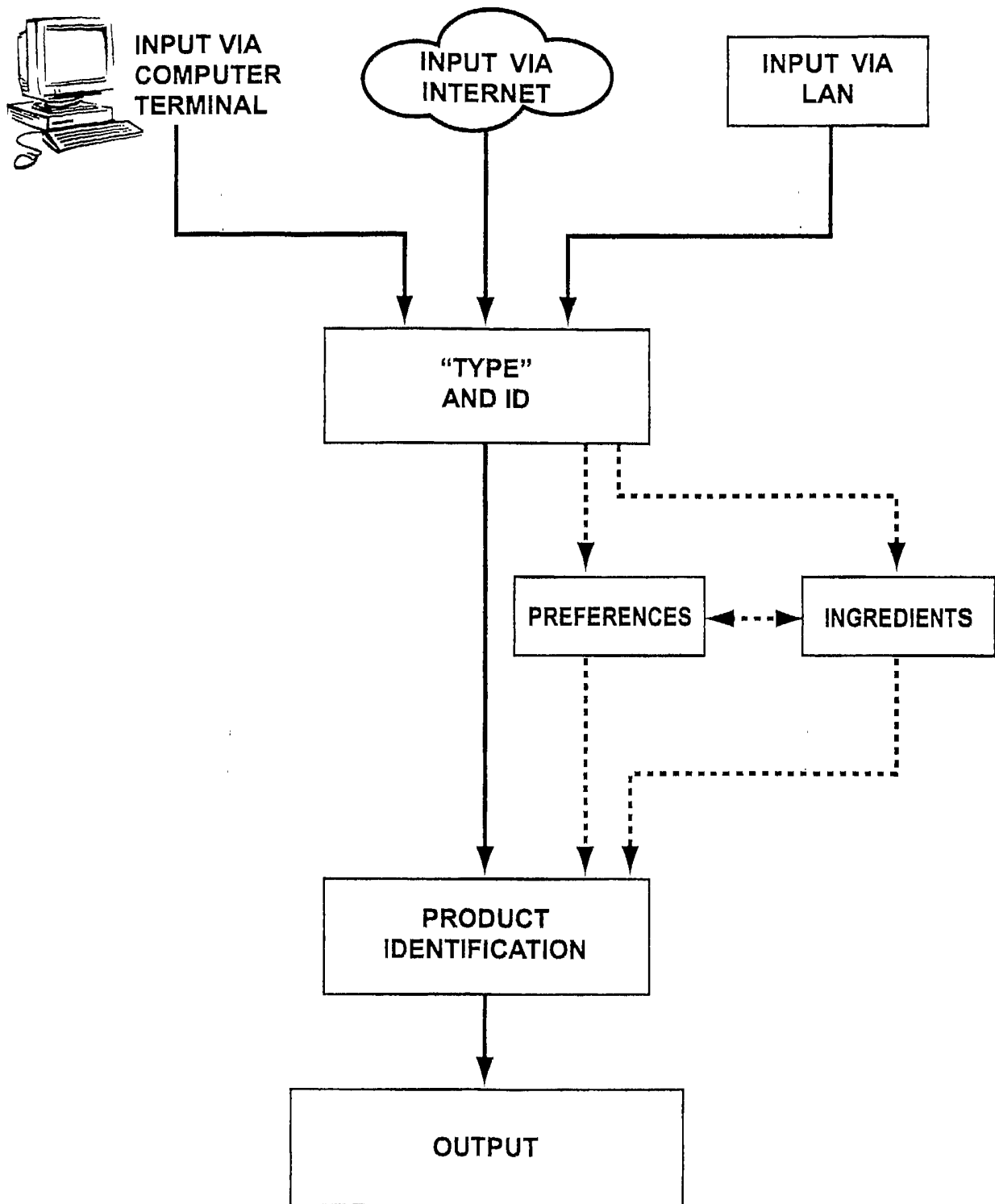


FIG. 1

Figure 2

OSPW	OSNW	OSPT	OSNT
ORPW	ORNW	ORPT	ORNT
DSPW	DSNW	DSPT	DSNT
DRPW	DRNW	DRPT	DRNT

Figure 3

OIFC	OITC	OIFS	OITS
OUFC	OUTC	OUFS	OUTS
DIFC	DITC	DIFS	DITS
DUFC	DUTC	DUFS	DUTS

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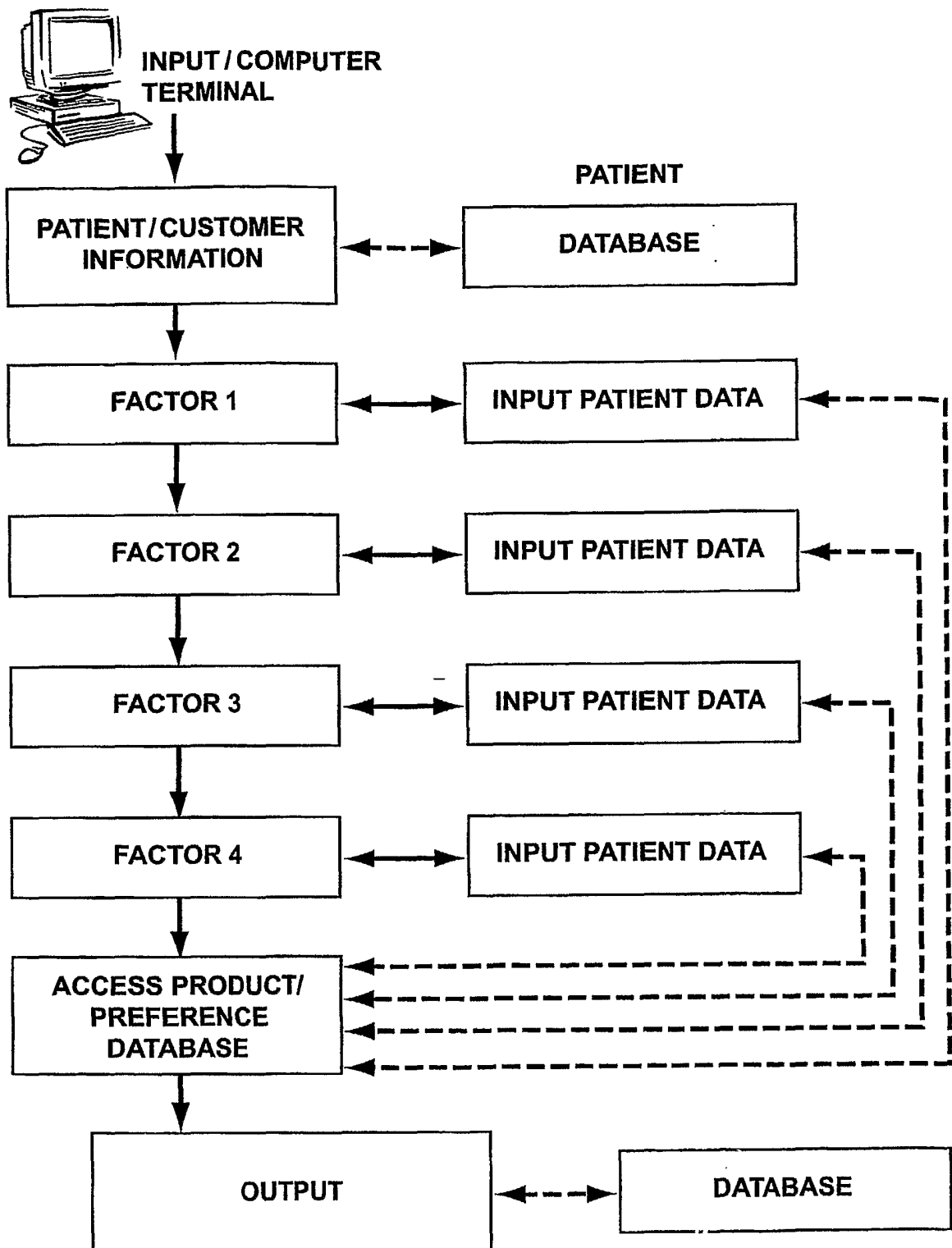


FIG. 4