US008260684B2

(12) **United States Patent**
Flusser et al.

(10) **Patent No.: US 8,260,684 B2**
(45) **Date of Patent: Sep. 4, 2012**

(54) **SYSTEM AND METHOD FOR COORDINATING AND EVALUATING APPAREL**

(75) Inventors: **Alan Flusser**, New York, NY (US); **Christian Bruck**, New York, NY (US)

(73) Assignee: **Bespeak Inc.**, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **12/897,774**

(22) Filed: **Oct. 4, 2010**

(65) **Prior Publication Data**

US 2011/0082764 A1 Apr. 7, 2011

Related U.S. Application Data

(60) Provisional application No. 61/248,132, filed on Oct. 2, 2009.

(51) **Int. Cl.**
G06Q 30/00 (2006.01)

(52) **U.S. Cl.** **705/26.7**; 705/26.1

(58) **Field of Classification Search** 705/26.7
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,089,216	B2 *	8/2006	Van Overveld	706/12
7,346,561	B1 *	3/2008	Devitt et al.	705/26.61
7,398,231	B2 *	7/2008	Wan et al.	705/26.7
7,584,122	B2 *	9/2009	Kozinn	705/26.5
2003/0226266	A1 *	12/2003	Ellis	33/17 R
2007/0143679	A1 *	6/2007	Resner	715/706
2008/0163344	A1 *	7/2008	Yang	726/4
2008/0297515	A1 *	12/2008	Bliss	345/473
2009/0157479	A1 *	6/2009	Caldwell et al.	705/10
2010/0023421	A1 *	1/2010	Wannier et al.	705/26
2010/0023426	A1 *	1/2010	Wannier et al.	705/27
2010/0030578	A1 *	2/2010	Siddique et al.	705/3
2010/0076819	A1 *	3/2010	Wannier et al.	705/10
2010/0313141	A1 *	12/2010	Yu et al.	715/747
2011/0035339	A1 *	2/2011	Wilson	705/500
2011/0184831	A1 *	7/2011	Dalgleish	705/26.7
2011/0184832	A1 *	7/2011	Wannier et al.	705/26.7
2012/0116917	A1 *	5/2012	Saul et al.	705/26.7

OTHER PUBLICATIONS

Closet Assistant attempts easy Web wardrobe management, social networking for turtlenecks (Posted Jan. 2, 2008 by Josh Lowensohn).*

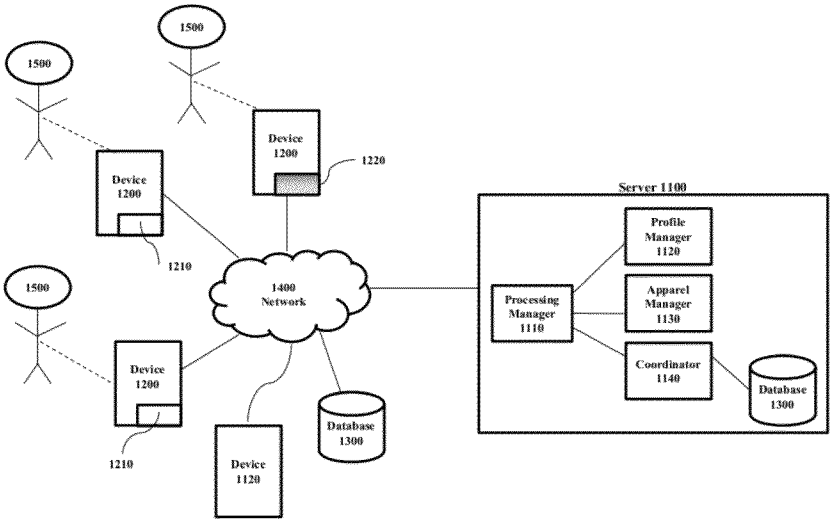
* cited by examiner

Primary Examiner — Bradley B. Bayat
(74) *Attorney, Agent, or Firm* — IM IP Law PLLC; C. Andrew Im

(57) **ABSTRACT**

A computer implemented method and system for coordinating and evaluating apparel/accessory items. The system comprises a processor based client device and a processor based server. The client device receives information about an apparel/accessory item for coordination from a user. The server receives the information about the apparel/accessory item from the client device over a communications network. The server calculates a coordination score of the apparel/accessory item by applying a plurality of predetermined rules to determine if the apparel/accessory item coordinates with one or more apparel/accessory items in the virtual wardrobe. The server transmits a recommendation of one or more apparel/accessory items in said virtual wardrobe based on the coordination score. The virtual wardrobe can be user's apparels/accessories or a retailer's stock of apparels/accessories for sale.

47 Claims, 14 Drawing Sheets



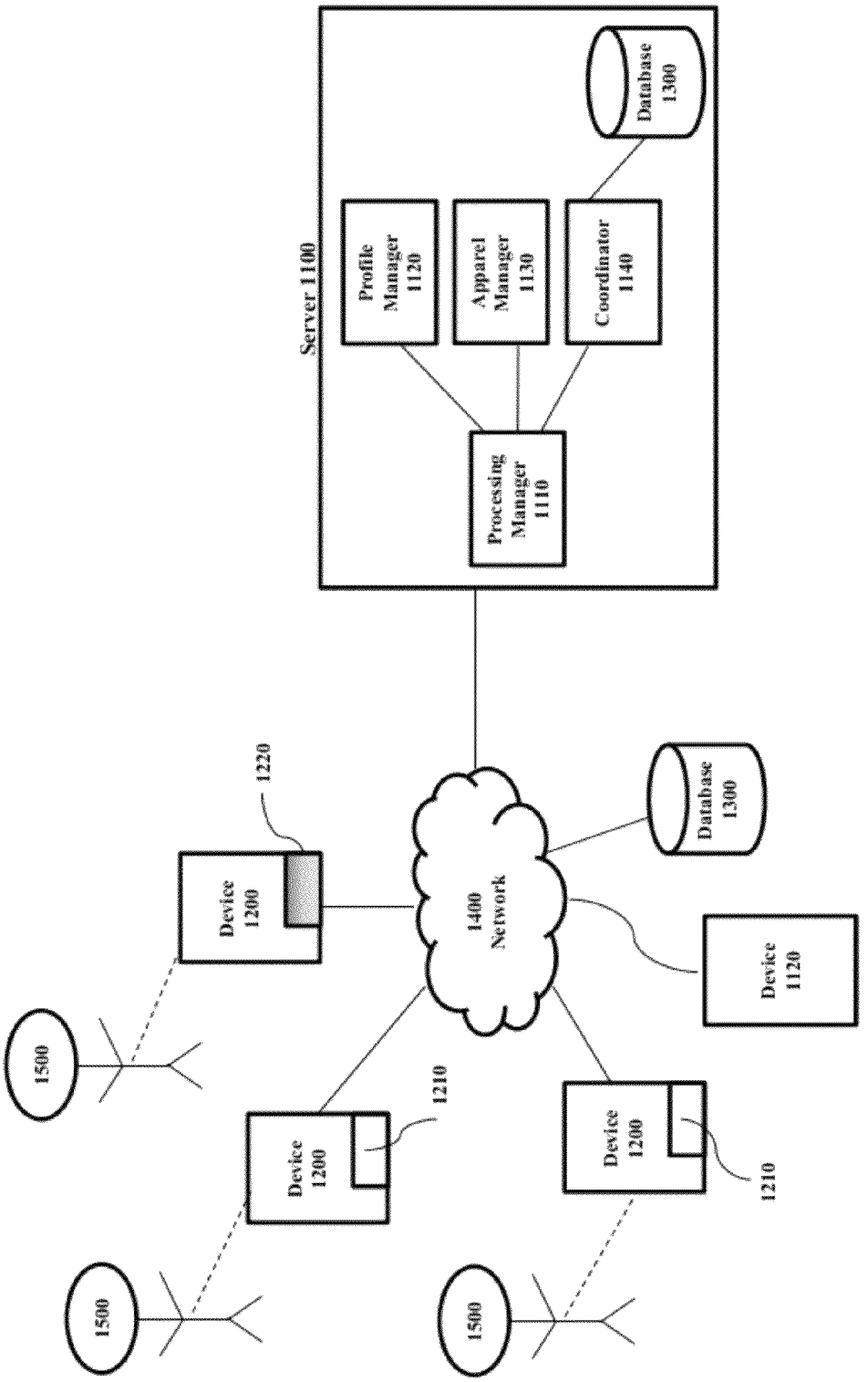

Server 1100
Database 1300
Profile Manager 1120
Apparel Manager 1130
Coordinator 1140
Processing Manager 1110
1400 Network
Database 1300
Device 1120
1220
Device 1200
1500
1210
Device 1200
1500
Device 1200
1210
1500

FIG. 1

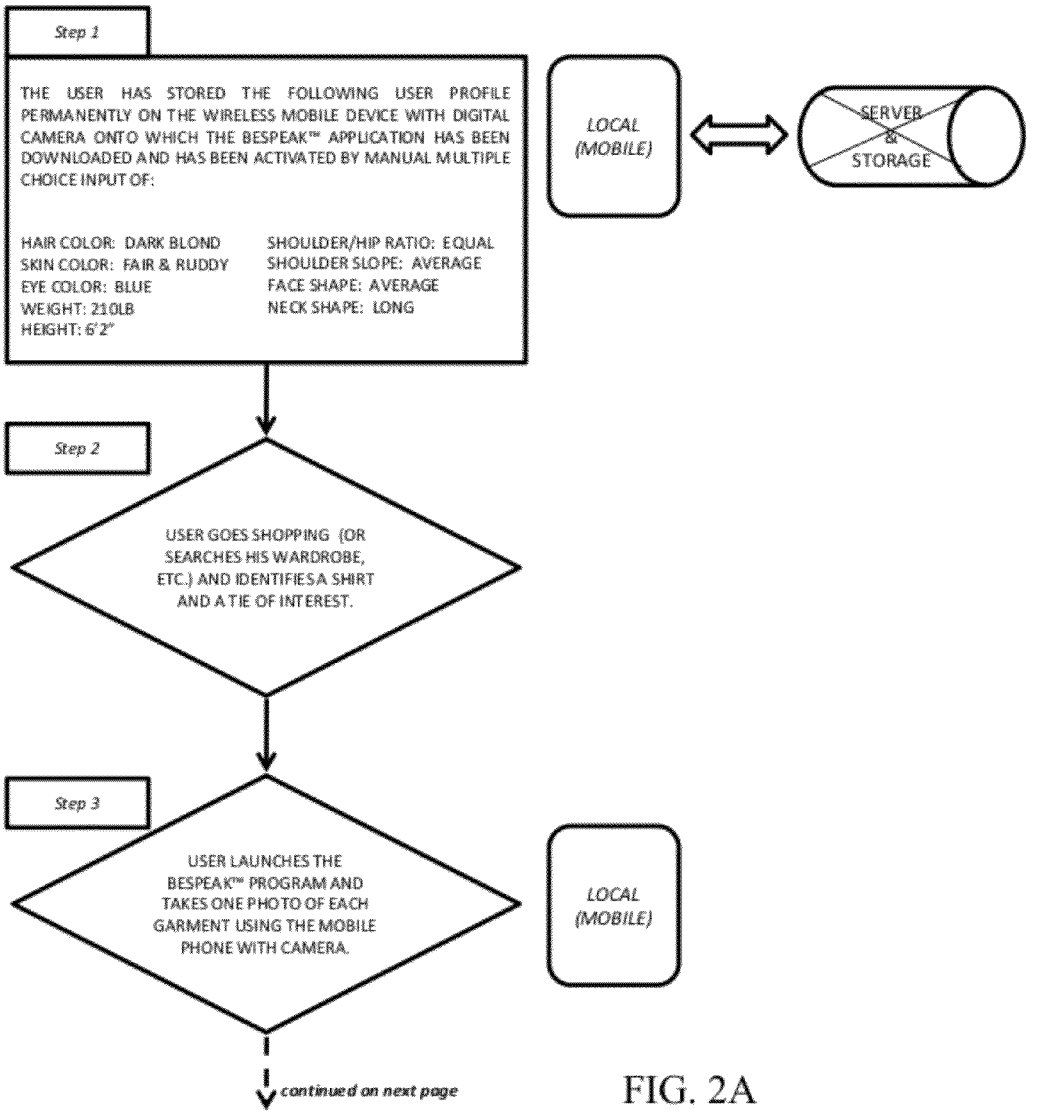

Step 1
THE USER HAS STORED THE FOLLOWING USER PROFILE PERMANENTLY ON THE WIRELESS MOBILE DEVICE WITH DIGITAL CAMERA ONTO WHICH THE BESPEAK™ APPLICATION HAS BEEN DOWNLOADED AND HAS BEEN ACTIVATED BY MANUAL MULTIPLE CHOICE INPUT OF:
HAIR COLOR: DARK BLOND
SKIN COLOR: FAIR & RUDDY
EYE COLOR: BLUE
WEIGHT: 210LB
HEIGHT: 6'2"
SHOULDER/HIP RATIO: EQUAL
SHOULDER SLOPE: AVERAGE
FACE SHAPE: AVERAGE
NECK SHAPE: LONG
LOCAL (MOBILE)
SERVER & STORAGE
Step 2
USER GOES SHOPPING (OR SEARCHES HIS WARDROBE, ETC.) AND IDENTIFIES A SHIRT AND A TIE OF INTEREST.
Step 3
USER LAUNCHES THE BESPEAK™ PROGRAM AND TAKES ONE PHOTO OF EACH GARMENT USING THE MOBILE PHONE WITH CAMERA.
LOCAL (MOBILE)
continued on next page

FIG. 2A

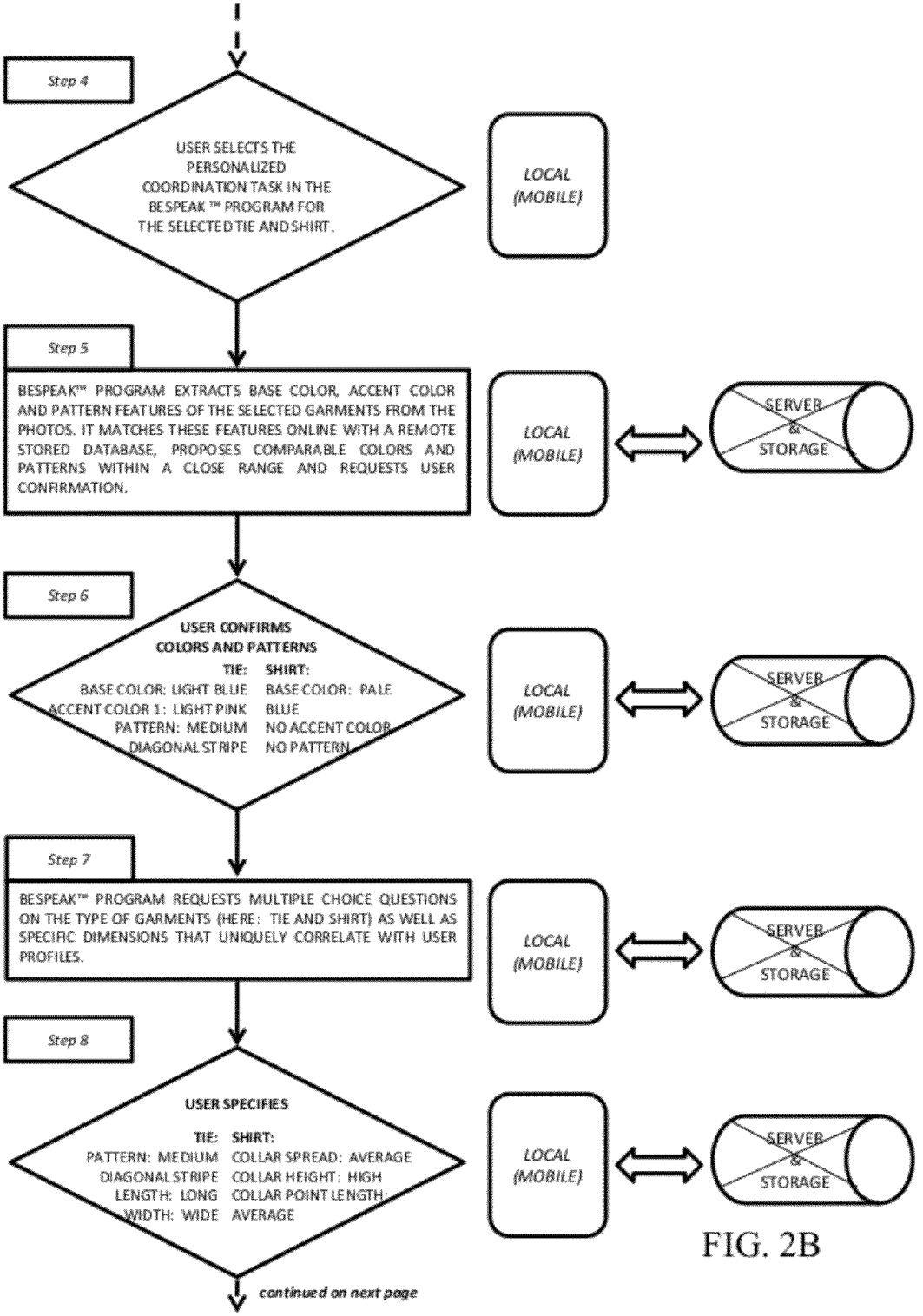

Step 4
USER SELECTS THE PERSONALIZED COORDINATION TASK IN THE BESPEAK ™ PROGRAM FOR THE SELECTED TIE AND SHIRT.
LOCAL (MOBILE)
Step 5
BESPEAK™ PROGRAM EXTRACTS BASE COLOR, ACCENT COLOR AND PATTERN FEATURES OF THE SELECTED GARMENTS FROM THE PHOTOS. IT MATCHES THESE FEATURES ONLINE WITH A REMOTE STORED DATABASE, PROPOSES COMPARABLE COLORS AND PATTERNS WITHIN A CLOSE RANGE AND REQUESTS USER CONFIRMATION.
LOCAL (MOBILE)
SERVER & STORAGE
Step 6
USER CONFIRMS COLORS AND PATTERNS
TIE: SHIRT:
BASE COLOR: LIGHT BLUE BASE COLOR: PALE
ACCENT COLOR 1: LIGHT PINK BLUE
PATTERN: MEDIUM NO ACCENT COLOR
DIAGONAL STRIPE NO PATTERN
LOCAL (MOBILE)
SERVER & STORAGE
Step 7
BESPEAK™ PROGRAM REQUESTS MULTIPLE CHOICE QUESTIONS ON THE TYPE OF GARMENTS (HERE: TIE AND SHIRT) AS WELL AS SPECIFIC DIMENSIONS THAT UNIQUELY CORRELATE WITH USER PROFILES.
LOCAL (MOBILE)
SERVER & STORAGE
Step 8
USER SPECIFIES
TIE: SHIRT:
PATTERN: MEDIUM COLLAR SPREAD: AVERAGE
DIAGONAL STRIPE COLLAR HEIGHT: HIGH
LENGTH: LONG COLLAR POINT LENGTH:
WIDTH: WIDE AVERAGE
LOCAL (MOBILE)
SERVER & STORAGE
continued on next page

FIG. 2B

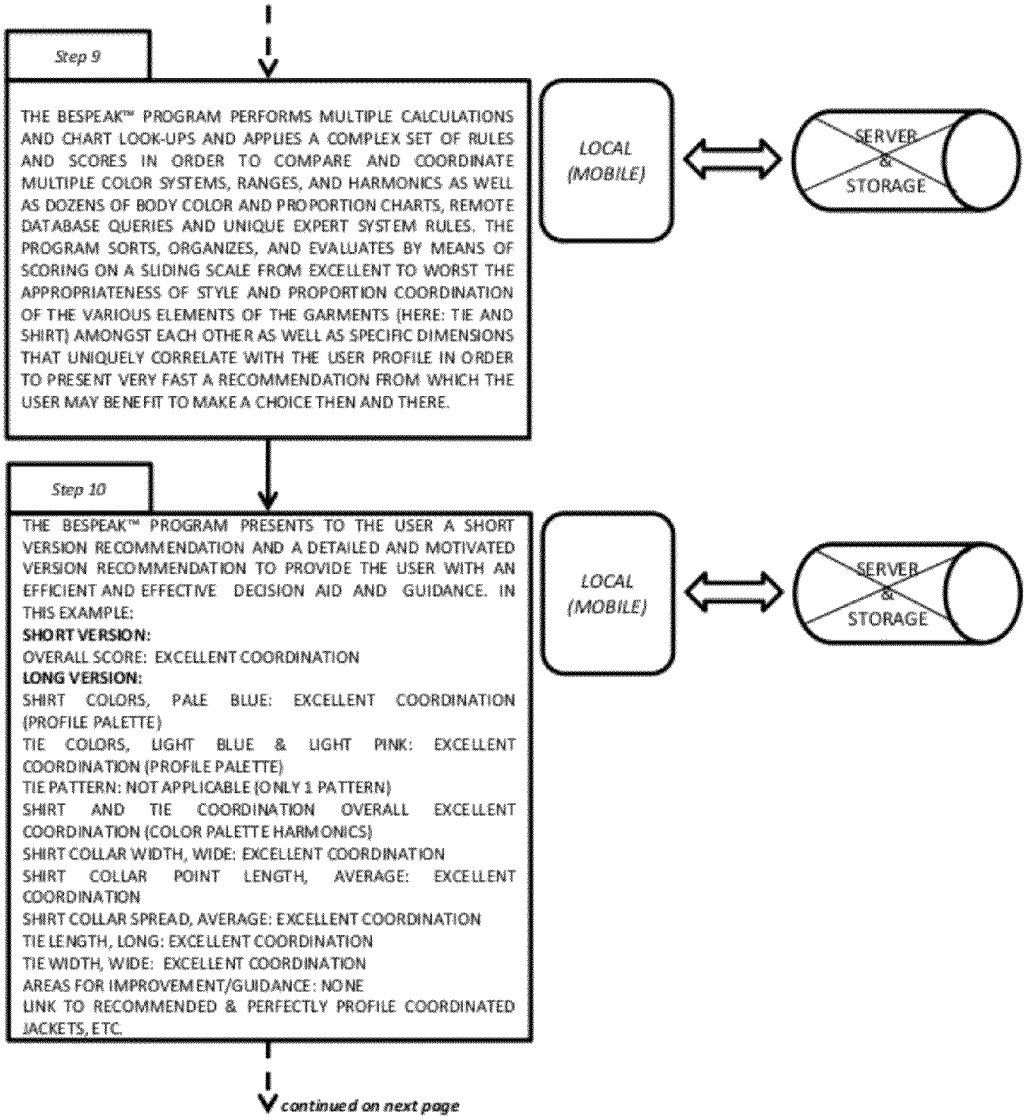

Step 9
THE BESPEAK™ PROGRAM PERFORMS MULTIPLE CALCULATIONS AND CHART LOOK-UPS AND APPLIES A COMPLEX SET OF RULES AND SCORES IN ORDER TO COMPARE AND COORDINATE MULTIPLE COLOR SYSTEMS, RANGES, AND HARMONICS AS WELL AS DOZENS OF BODY COLOR AND PROPORTION CHARTS, REMOTE DATABASE QUERIES AND UNIQUE EXPERT SYSTEM RULES. THE PROGRAM SORTS, ORGANIZES, AND EVALUATES BY MEANS OF SCORING ON A SLIDING SCALE FROM EXCELLENT TO WORST THE APPROPRIATENESS OF STYLE AND PROPORTION COORDINATION OF THE VARIOUS ELEMENTS OF THE GARMENTS (HERE: TIE AND SHIRT) AMONGST EACH OTHER AS WELL AS SPECIFIC DIMENSIONS THAT UNIQUELY CORRELATE WITH THE USER PROFILE IN ORDER TO PRESENT VERY FAST A RECOMMENDATION FROM WHICH THE USER MAY BENEFIT TO MAKE A CHOICE THEN AND THERE.
LOCAL (MOBILE)
SERVER & STORAGE
Step 10
THE BESPEAK™ PROGRAM PRESENTS TO THE USER A SHORT VERSION RECOMMENDATION AND A DETAILED AND MOTIVATED VERSION RECOMMENDATION TO PROVIDE THE USER WITH AN EFFICIENT AND EFFECTIVE DECISION AID AND GUIDANCE. IN THIS EXAMPLE:
SHORT VERSION:
OVERALL SCORE: EXCELLENT COORDINATION
LONG VERSION:
SHIRT COLORS, PALE BLUE: EXCELLENT COORDINATION (PROFILE PALETTE)
TIE COLORS, LIGHT BLUE & LIGHT PINK: EXCELLENT COORDINATION (PROFILE PALETTE)
TIE PATTERN: NOT APPLICABLE (ONLY 1 PATTERN)
SHIRT AND TIE COORDINATION OVERALL EXCELLENT COORDINATION (COLOR PALETTE HARMONICS)
SHIRT COLLAR WIDTH, WIDE: EXCELLENT COORDINATION
SHIRT COLLAR POINT LENGTH, AVERAGE: EXCELLENT COORDINATION
SHIRT COLLAR SPREAD, AVERAGE: EXCELLENT COORDINATION
TIE LENGTH, LONG: EXCELLENT COORDINATION
TIE WIDTH, WIDE: EXCELLENT COORDINATION
AREAS FOR IMPROVEMENT/GUIDANCE: NONE
LINK TO RECOMMENDED & PERFECTLY PROFILE COORDINATED JACKETS, ETC.
LOCAL (MOBILE)
SERVER & STORAGE
continued on next page

FIG. 2C

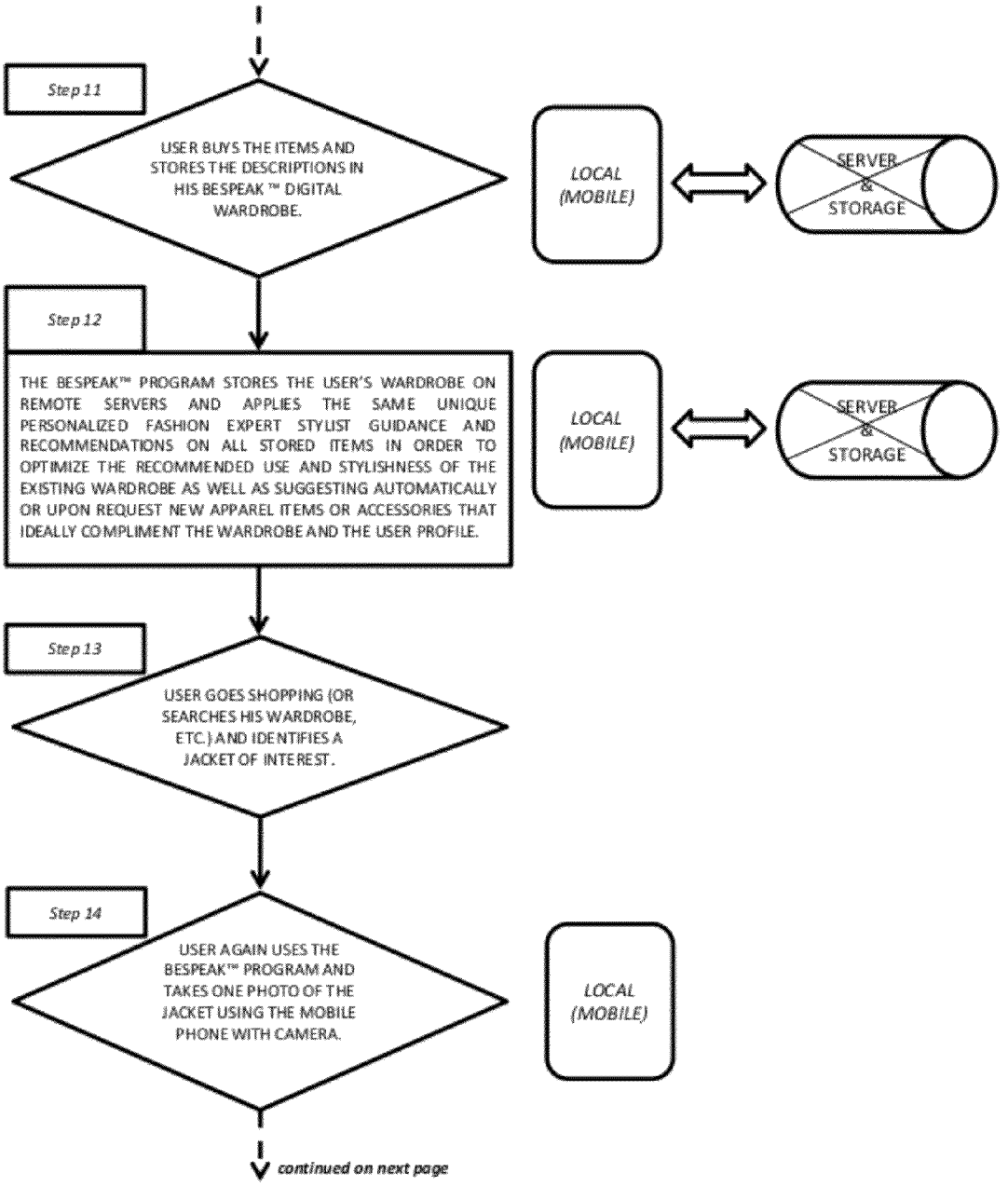

Step 11
USER BUYS THE ITEMS AND STORES THE DESCRIPTIONS IN HIS BESPEAK ™ DIGITAL WARDROBE.
LOCAL (MOBILE)
SERVER & STORAGE
Step 12
THE BESPEAK™ PROGRAM STORES THE USER'S WARDROBE ON REMOTE SERVERS AND APPLIES THE SAME UNIQUE PERSONALIZED FASHION EXPERT STYLIST GUIDANCE AND RECOMMENDATIONS ON ALL STORED ITEMS IN ORDER TO OPTIMIZE THE RECOMMENDED USE AND STYLISHNESS OF THE EXISTING WARDROBE AS WELL AS SUGGESTING AUTOMATICALLY OR UPON REQUEST NEW APPAREL ITEMS OR ACCESSORIES THAT IDEALLY COMPLIMENT THE WARDROBE AND THE USER PROFILE.
LOCAL (MOBILE)
SERVER & STORAGE
Step 13
USER GOES SHOPPING (OR SEARCHES HIS WARDROBE, ETC.) AND IDENTIFIES A JACKET OF INTEREST.
Step 14
USER AGAIN USES THE BESPEAK™ PROGRAM AND TAKES ONE PHOTO OF THE JACKET USING THE MOBILE PHONE WITH CAMERA.
LOCAL (MOBILE)
continued on next page

FIG. 2D

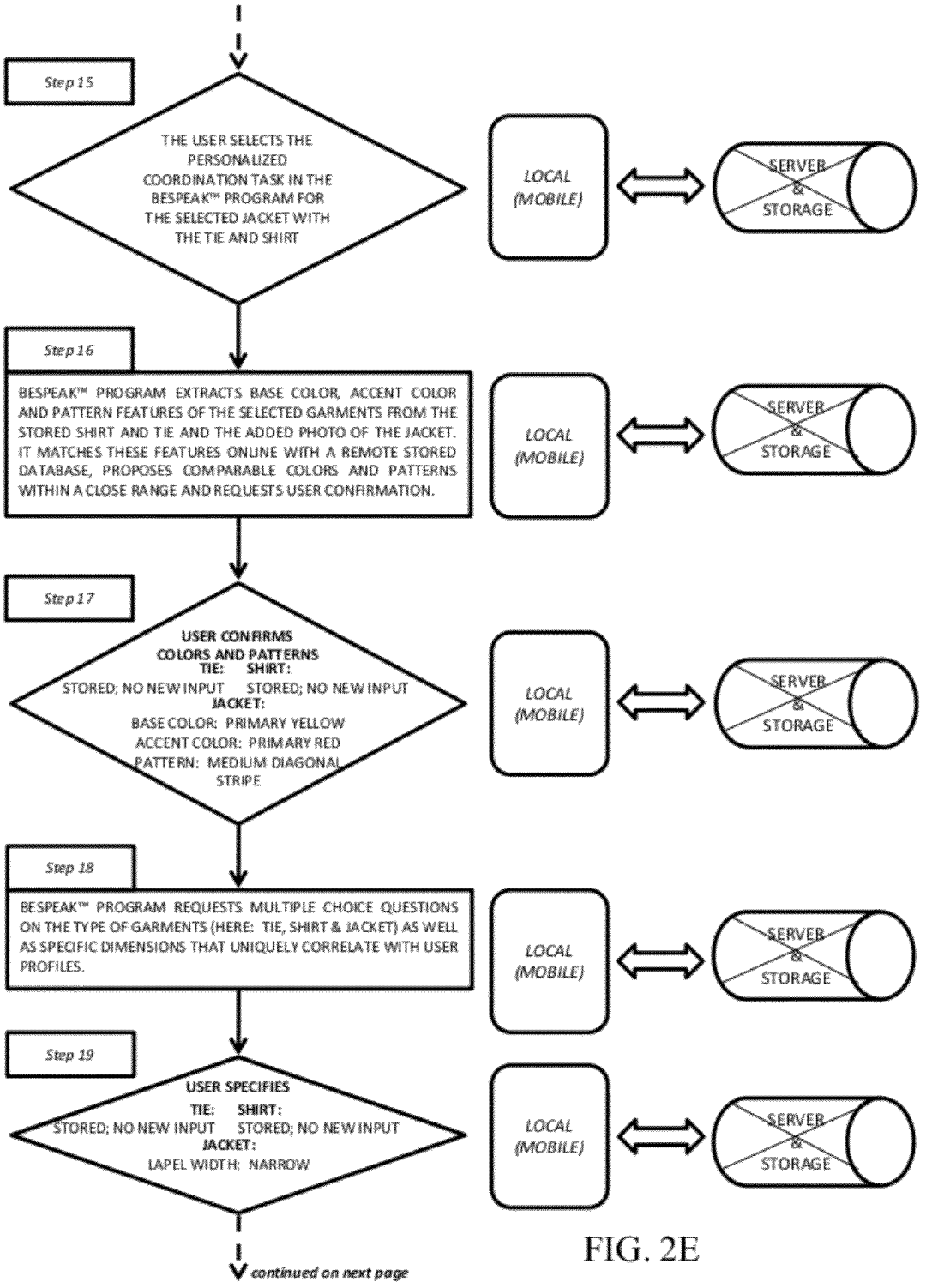

Step 15
THE USER SELECTS THE PERSONALIZED COORDINATION TASK IN THE BESPEAK™ PROGRAM FOR THE SELECTED JACKET WITH THE TIE AND SHIRT
LOCAL (MOBILE)
SERVER & STORAGE
Step 16
BESPEAK™ PROGRAM EXTRACTS BASE COLOR, ACCENT COLOR AND PATTERN FEATURES OF THE SELECTED GARMENTS FROM THE STORED SHIRT AND TIE AND THE ADDED PHOTO OF THE JACKET. IT MATCHES THESE FEATURES ONLINE WITH A REMOTE STORED DATABASE, PROPOSES COMPARABLE COLORS AND PATTERNS WITHIN A CLOSE RANGE AND REQUESTS USER CONFIRMATION.
LOCAL (MOBILE)
SERVER & STORAGE
Step 17
USER CONFIRMS
COLORS AND PATTERNS
TIE: SHIRT:
STORED; NO NEW INPUT STORED; NO NEW INPUT
JACKET:
BASE COLOR: PRIMARY YELLOW
ACCENT COLOR: PRIMARY RED
PATTERN: MEDIUM DIAGONAL STRIPE
LOCAL (MOBILE)
SERVER & STORAGE
Step 18
BESPEAK™ PROGRAM REQUESTS MULTIPLE CHOICE QUESTIONS ON THE TYPE OF GARMENTS (HERE: TIE, SHIRT & JACKET) AS WELL AS SPECIFIC DIMENSIONS THAT UNIQUELY CORRELATE WITH USER PROFILES.
LOCAL (MOBILE)
SERVER & STORAGE
Step 19
USER SPECIFIES
TIE: SHIRT:
STORED; NO NEW INPUT STORED; NO NEW INPUT
JACKET:
LAPEL WIDTH: NARROW
LOCAL (MOBILE)
SERVER & STORAGE
continued on next page

FIG. 2E

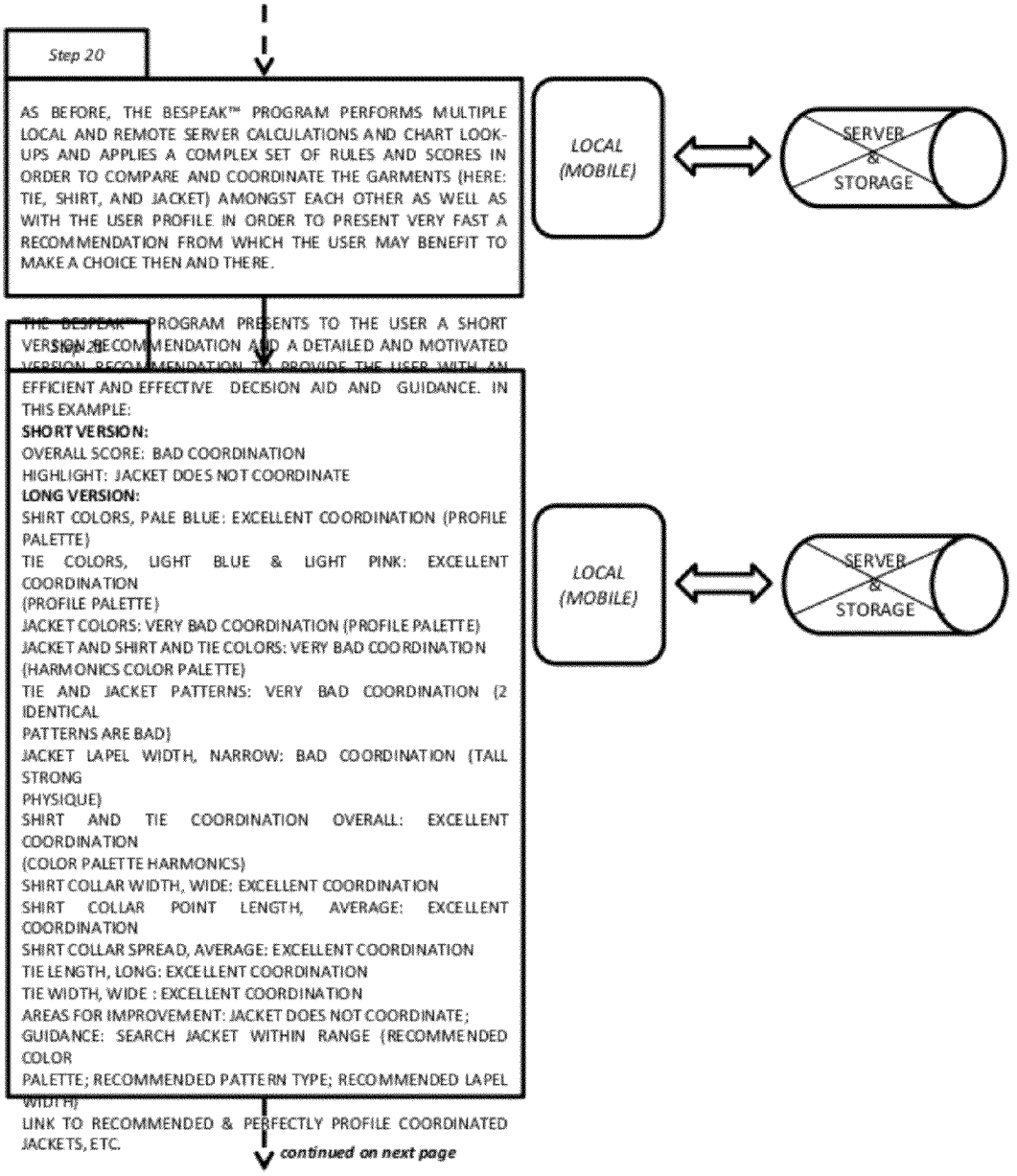

Step 20
AS BEFORE, THE BESPEAK™ PROGRAM PERFORMS MULTIPLE LOCAL AND REMOTE SERVER CALCULATIONS AND CHART LOOK-UPS AND APPLIES A COMPLEX SET OF RULES AND SCORES IN ORDER TO COMPARE AND COORDINATE THE GARMENTS (HERE: TIE, SHIRT, AND JACKET) AMONGST EACH OTHER AS WELL AS WITH THE USER PROFILE IN ORDER TO PRESENT VERY FAST A RECOMMENDATION FROM WHICH THE USER MAY BENEFIT TO MAKE A CHOICE THEN AND THERE.
LOCAL (MOBILE)
SERVER & STORAGE
Step 21
THE BESPEAK™ PROGRAM PRESENTS TO THE USER A SHORT VERSION RECOMMENDATION AND A DETAILED AND MOTIVATED VERSION RECOMMENDATION TO PROVIDE THE USER WITH AN EFFICIENT AND EFFECTIVE DECISION AID AND GUIDANCE. IN THIS EXAMPLE:
SHORT VERSION:
OVERALL SCORE: BAD COORDINATION
HIGHLIGHT: JACKET DOES NOT COORDINATE
LONG VERSION:
SHIRT COLORS, PALE BLUE: EXCELLENT COORDINATION (PROFILE PALETTE)
TIE COLORS, LIGHT BLUE & LIGHT PINK: EXCELLENT COORDINATION
(PROFILE PALETTE)
JACKET COLORS: VERY BAD COORDINATION (PROFILE PALETTE)
JACKET AND SHIRT AND TIE COLORS: VERY BAD COORDINATION (HARMONICS COLOR PALETTE)
TIE AND JACKET PATTERNS: VERY BAD COORDINATION (2 IDENTICAL
PATTERNS ARE BAD)
JACKET LAPEL WIDTH, NARROW: BAD COORDINATION (TALL STRONG
PHYSIQUE)
SHIRT AND TIE COORDINATION OVERALL: EXCELLENT COORDINATION
(COLOR PALETTE HARMONICS)
SHIRT COLLAR WIDTH, WIDE: EXCELLENT COORDINATION
SHIRT COLLAR POINT LENGTH, AVERAGE: EXCELLENT COORDINATION
SHIRT COLLAR SPREAD, AVERAGE: EXCELLENT COORDINATION
TIE LENGTH, LONG: EXCELLENT COORDINATION
TIE WIDTH, WIDE : EXCELLENT COORDINATION
AREAS FOR IMPROVEMENT: JACKET DOES NOT COORDINATE;
GUIDANCE: SEARCH JACKET WITHIN RANGE (RECOMMENDED COLOR
PALETTE; RECOMMENDED PATTERN TYPE; RECOMMENDED LAPEL WIDTH)
LINK TO RECOMMENDED & PERFECTLY PROFILE COORDINATED JACKETS, ETC.
continued on next page
LOCAL (MOBILE)
SERVER & STORAGE

FIG. 2F

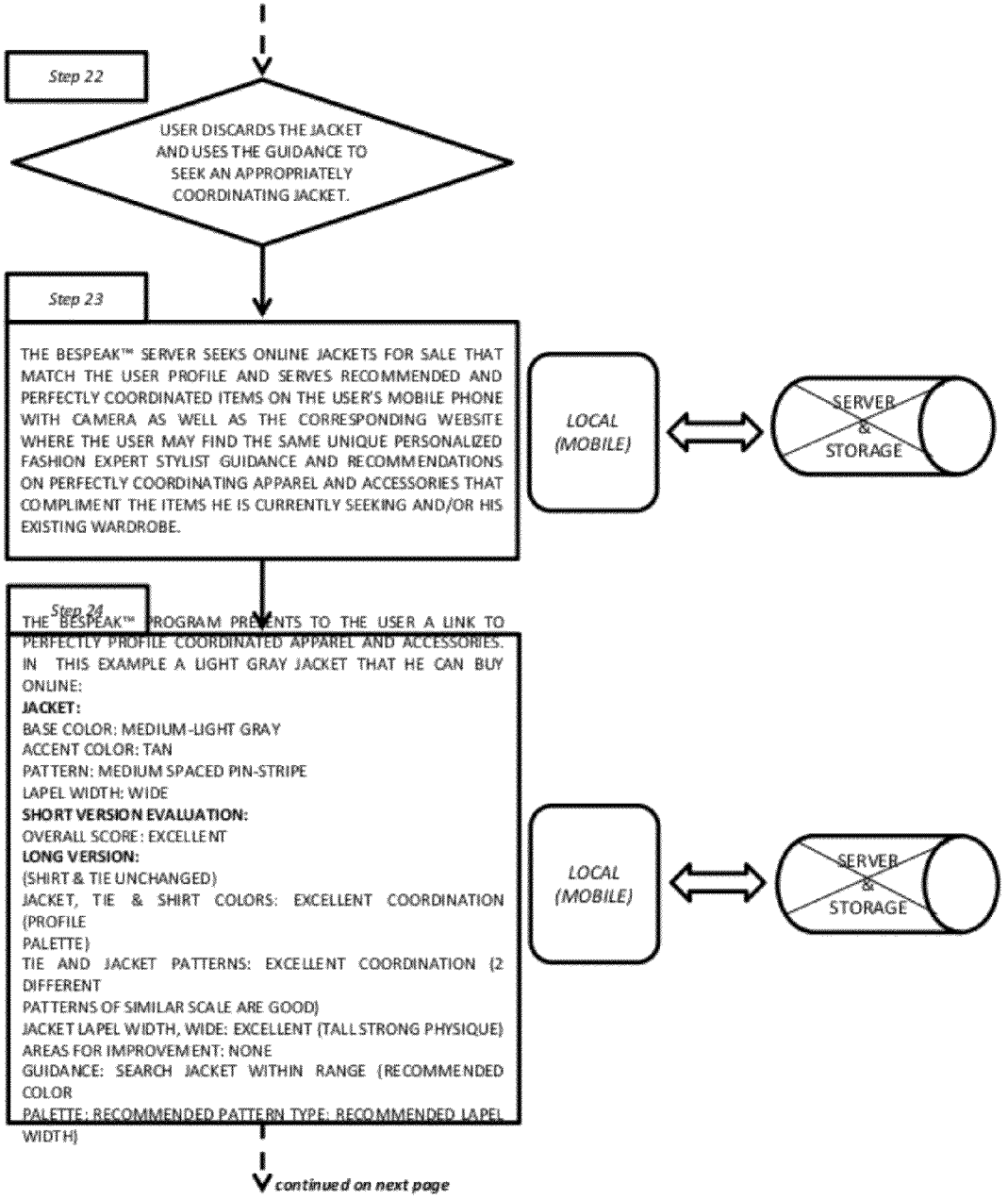

Step 22
USER DISCARDS THE JACKET AND USES THE GUIDANCE TO SEEK AN APPROPRIATELY COORDINATING JACKET.
Step 23
THE BESPEAK™ SERVER SEEKS ONLINE JACKETS FOR SALE THAT MATCH THE USER PROFILE AND SERVES RECOMMENDED AND PERFECTLY COORDINATED ITEMS ON THE USER'S MOBILE PHONE WITH CAMERA AS WELL AS THE CORRESPONDING WEBSITE WHERE THE USER MAY FIND THE SAME UNIQUE PERSONALIZED FASHION EXPERT STYLIST GUIDANCE AND RECOMMENDATIONS ON PERFECTLY COORDINATING APPAREL AND ACCESSORIES THAT COMPLIMENT THE ITEMS HE IS CURRENTLY SEEKING AND/OR HIS EXISTING WARDROBE.
LOCAL (MOBILE)
SERVER & STORAGE
Step 24
THE BESPEAK™ PROGRAM PRESENTS TO THE USER A LINK TO PERFECTLY PROFILE COORDINATED APPAREL AND ACCESSORIES. IN THIS EXAMPLE A LIGHT GRAY JACKET THAT HE CAN BUY ONLINE:
JACKET:
BASE COLOR: MEDIUM-LIGHT GRAY
ACCENT COLOR: TAN
PATTERN: MEDIUM SPACED PIN-STRIPE
LAPEL WIDTH: WIDE
SHORT VERSION EVALUATION:
OVERALL SCORE: EXCELLENT
LONG VERSION:
(SHIRT & TIE UNCHANGED)
JACKET, TIE & SHIRT COLORS: EXCELLENT COORDINATION (PROFILE PALETTE)
TIE AND JACKET PATTERNS: EXCELLENT COORDINATION (2 DIFFERENT PATTERNS OF SIMILAR SCALE ARE GOOD)
JACKET LAPEL WIDTH, WIDE: EXCELLENT (TALL STRONG PHYSIQUE)
AREAS FOR IMPROVEMENT: NONE
GUIDANCE: SEARCH JACKET WITHIN RANGE (RECOMMENDED COLOR PALETTE; RECOMMENDED PATTERN TYPE; RECOMMENDED LAPEL WIDTH)
LOCAL (MOBILE)
SERVER & STORAGE
continued on next page

FIG. 2G

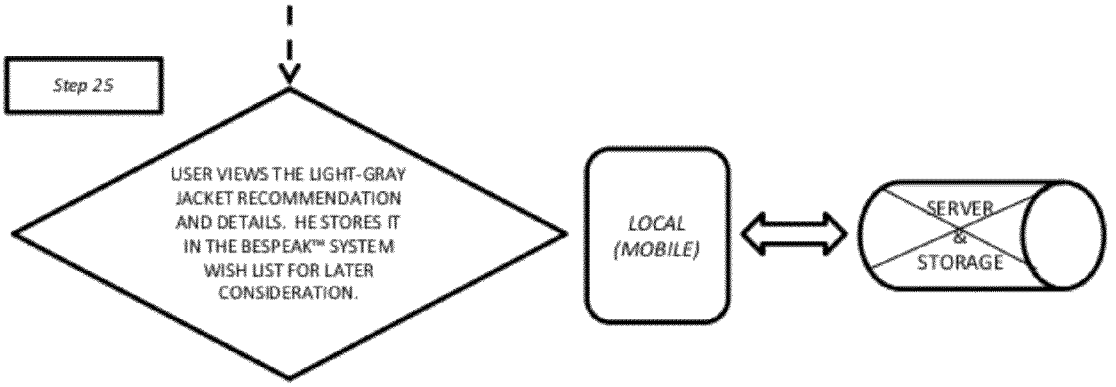

Step 25
USER VIEWS THE LIGHT-GRAY JACKET RECOMMENDATION AND DETAILS. HE STORES IT IN THE BESPEAK™ SYSTEM WISH LIST FOR LATER CONSIDERATION.
LOCAL (MOBILE)
SERVER & STORAGE

FIG. 2H

MATRIX 1 (M1) = Profile 1

200

> Contrast Type Muted Tonal - MT -
>> Blond hair (No. 7 out of 'Hair color chart' No. 7 out of 8)
>> Fair slightly ruddy skin (No. 2 from 'Skin color chart' out of 10 choices)
>> Eyes blue (No. 3 from 'Eye color chart' out of 6 choices)
> Shoulders & hips same width (No. 2 from 'Body type chart' out of 3 choices)
> Long neck (No. 1 from 'Neck type chart' out of 3 choices)
> Average face shape (No. 2 from 'Face type chart' out of 3 choices)
> Size 190 cm tall
> Weight 100kg

250

> Base Color 'Light Blue': Color No. X belongs to
1) subset MT (Muted — Tonal) from all 206 websafe colors which constitute the total set of colors
2) subset 'Monochromatic' harmony from all colors

> Accent Color 1 'Light Pink': Color No. Y belongs to
1) subset MT (Muted — Tonal) from all 206 websafe colors which constitute the total set of colors
2) subset 'Complementary' harmony from all colors

> Pattern 'Medium Regular diagonal' (Pattern No. Z from 'Pattern Types' out of a total 20 possible pattern types) belongs to subset of all patterns compatible with all body types.

> Tie width: wide (No. 2 from 'Tie width chart' out of two choices)
> Tie length: long (No. 2 from 'Tie length chart' out of two choices)

FIG. 3A

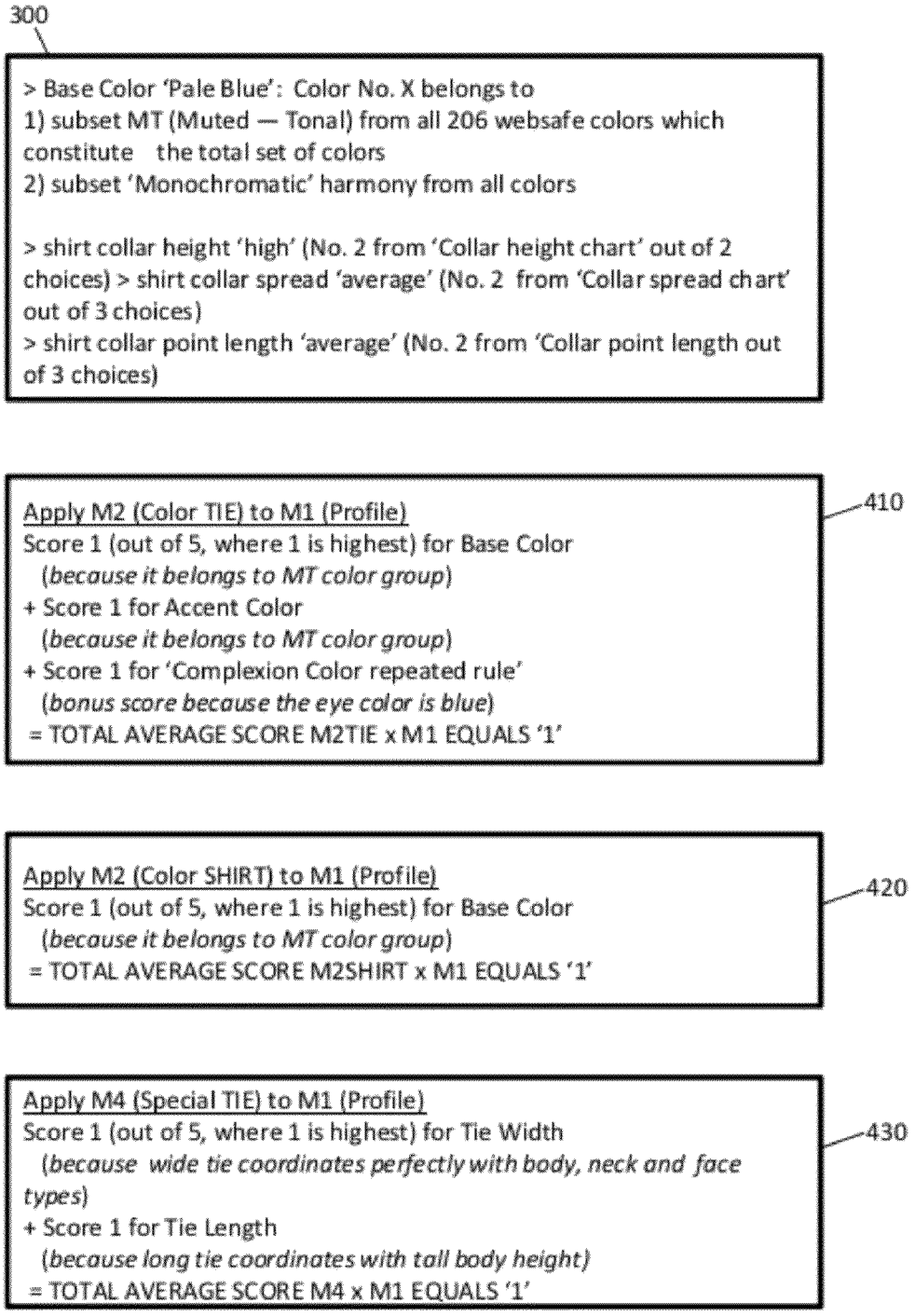

300
> Base Color 'Pale Blue': Color No. X belongs to
1) subset MT (Muted — Tonal) from all 206 websafe colors which constitute the total set of colors
2) subset 'Monochromatic' harmony from all colors
> shirt collar height 'high' (No. 2 from 'Collar height chart' out of 2 choices) > shirt collar spread 'average' (No. 2 from 'Collar spread chart' out of 3 choices)
> shirt collar point length 'average' (No. 2 from 'Collar point length out of 3 choices)
Apply M2 (Color TIE) to M1 (Profile)
Score 1 (out of 5, where 1 is highest) for Base Color
(because it belongs to MT color group)
+ Score 1 for Accent Color
(because it belongs to MT color group)
+ Score 1 for 'Complexion Color repeated rule'
(bonus score because the eye color is blue)
= TOTAL AVERAGE SCORE M2TIE x M1 EQUALS '1'
410
Apply M2 (Color SHIRT) to M1 (Profile)
Score 1 (out of 5, where 1 is highest) for Base Color
(because it belongs to MT color group)
= TOTAL AVERAGE SCORE M2SHIRT x M1 EQUALS '1'
420
Apply M4 (Special TIE) to M1 (Profile)
Score 1 (out of 5, where 1 is highest) for Tie Width
(because wide tie coordinates perfectly with body, neck and face types)
+ Score 1 for Tie Length
(because long tie coordinates with tall body height)
= TOTAL AVERAGE SCORE M4 x M1 EQUALS '1'
430

FIG. 3B

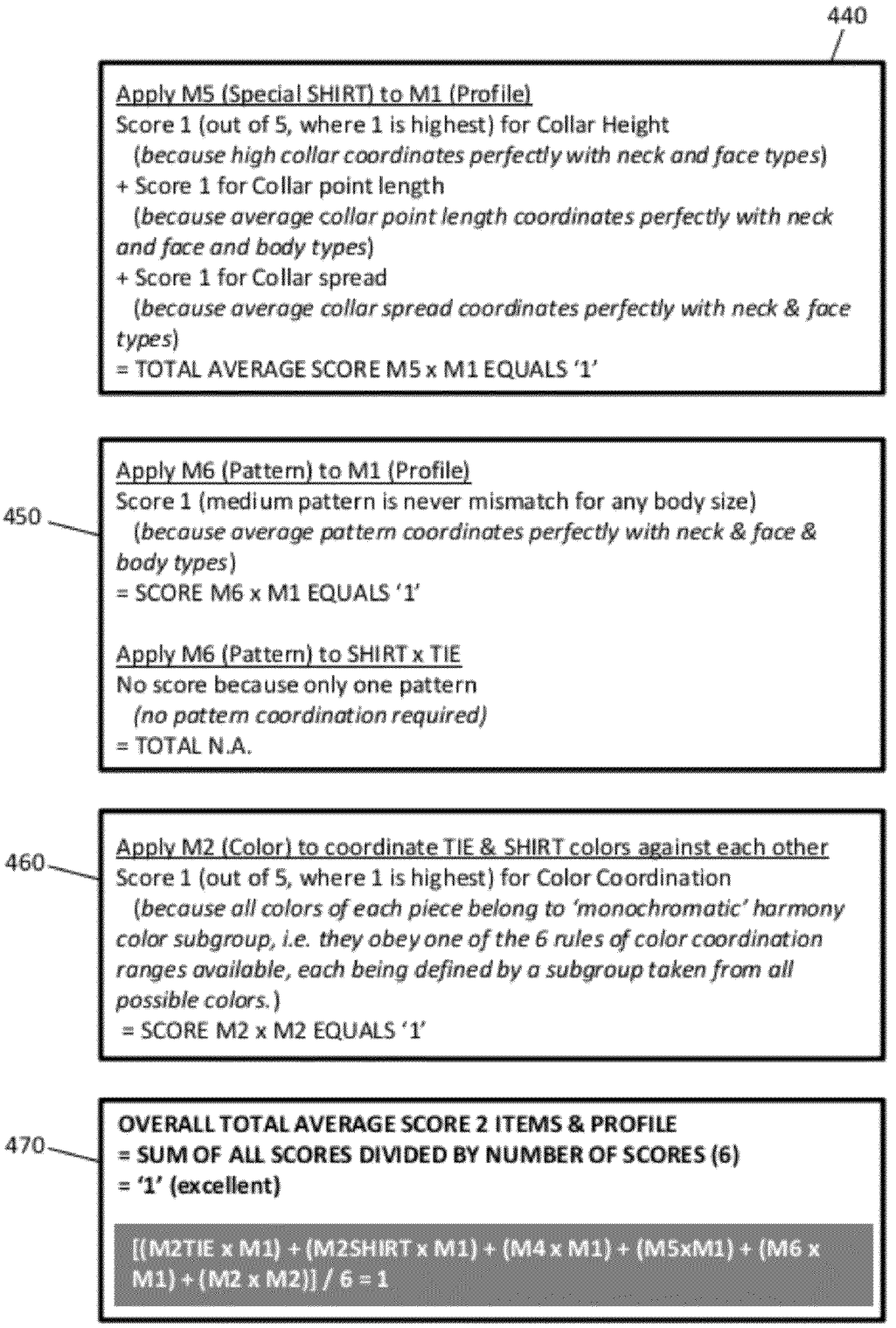

440
Apply M5 (Special SHIRT) to M1 (Profile)
Score 1 (out of 5, where 1 is highest) for Collar Height
(because high collar coordinates perfectly with neck and face types)
+ Score 1 for Collar point length
(because average collar point length coordinates perfectly with neck and face and body types)
+ Score 1 for Collar spread
(because average collar spread coordinates perfectly with neck & face types)
= TOTAL AVERAGE SCORE M5 x M1 EQUALS '1'
450
Apply M6 (Pattern) to M1 (Profile)
Score 1 (medium pattern is never mismatch for any body size)
(because average pattern coordinates perfectly with neck & face & body types)
= SCORE M6 x M1 EQUALS '1'
Apply M6 (Pattern) to SHIRT x TIE
No score because only one pattern
(no pattern coordination required)
= TOTAL N.A.
460
Apply M2 (Color) to coordinate TIE & SHIRT colors against each other
Score 1 (out of 5, where 1 is highest) for Color Coordination
(because all colors of each piece belong to 'monochromatic' harmony color subgroup, i.e. they obey one of the 6 rules of color coordination ranges available, each being defined by a subgroup taken from all possible colors.)
= SCORE M2 x M2 EQUALS '1'
470
OVERALL TOTAL AVERAGE SCORE 2 ITEMS & PROFILE
= SUM OF ALL SCORES DIVIDED BY NUMBER OF SCORES (6)
= '1' (excellent)
[(M2TIE x M1) + (M2SHIRT x M1) + (M4 x M1) + (M5xM1) + (M6 x M1) + (M2 x M2)] / 6 = 1

FIG. 3C

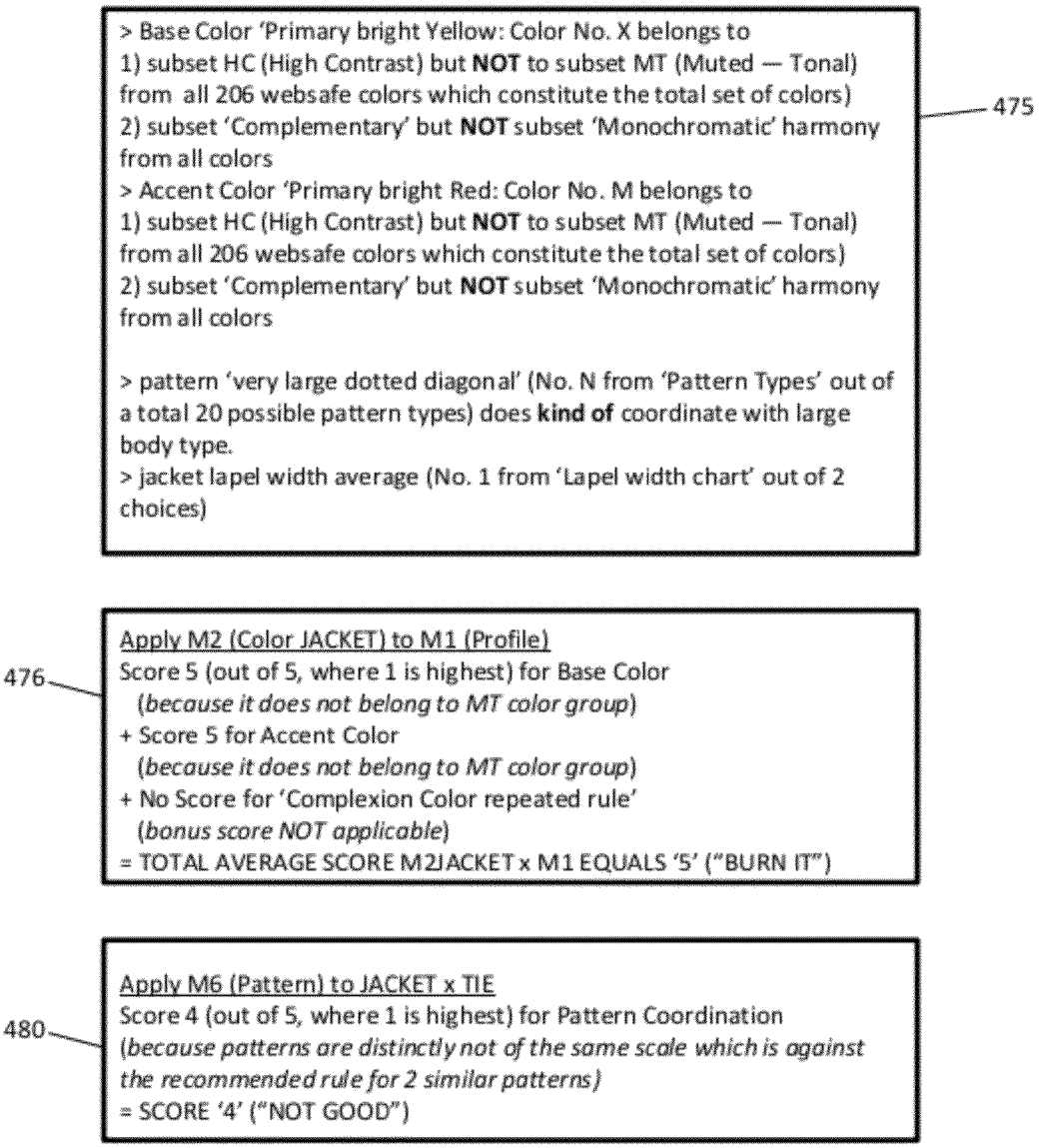

> Base Color 'Primary bright Yellow: Color No. X belongs to
1) subset HC (High Contrast) but **NOT** to subset MT (Muted — Tonal) from all 206 websafe colors which constitute the total set of colors)
2) subset 'Complementary' but **NOT** subset 'Monochromatic' harmony from all colors
> Accent Color 'Primary bright Red: Color No. M belongs to
1) subset HC (High Contrast) but **NOT** to subset MT (Muted — Tonal) from all 206 websafe colors which constitute the total set of colors)
2) subset 'Complementary' but **NOT** subset 'Monochromatic' harmony from all colors
> pattern 'very large dotted diagonal' (No. N from 'Pattern Types' out of a total 20 possible pattern types) does **kind of** coordinate with large body type.
> jacket lapel width average (No. 1 from 'Lapel width chart' out of 2 choices)
475
Apply M2 (Color JACKET) to M1 (Profile)
476
Score 5 (out of 5, where 1 is highest) for Base Color
(*because it does not belong to MT color group*)
+ Score 5 for Accent Color
(*because it does not belong to MT color group*)
+ No Score for 'Complexion Color repeated rule'
(*bonus score NOT applicable*)
= TOTAL AVERAGE SCORE M2JACKET x M1 EQUALS '5' ("BURN IT")
Apply M6 (Pattern) to JACKET x TIE
480
Score 4 (out of 5, where 1 is highest) for Pattern Coordination
(*because patterns are distinctly not of the same scale which is against the recommended rule for 2 similar patterns)*
= SCORE '4' ("NOT GOOD")

FIG. 3D

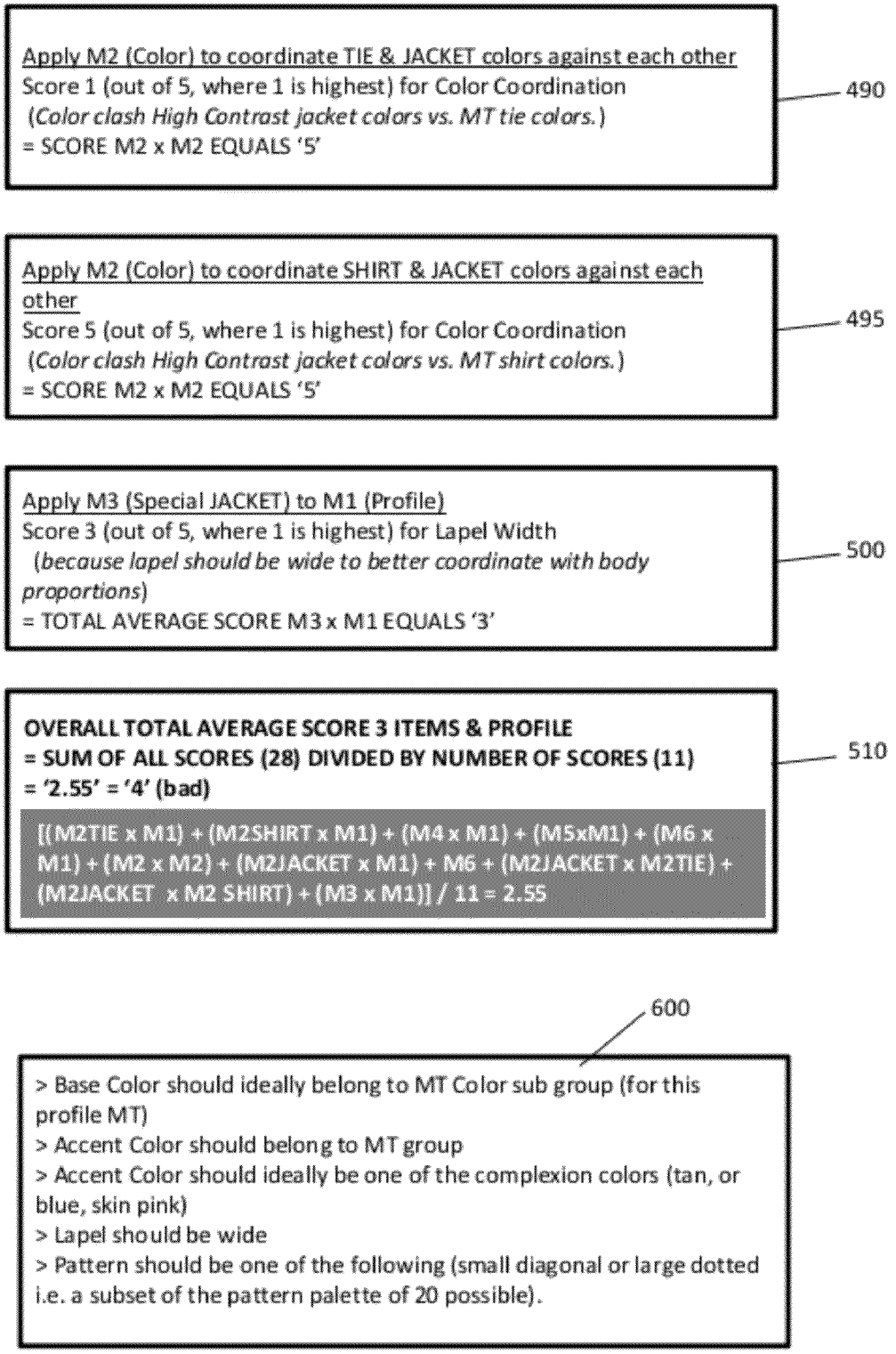

Apply M2 (Color) to coordinate TIE & JACKET colors against each other
Score 1 (out of 5, where 1 is highest) for Color Coordination
(Color clash High Contrast jacket colors vs. MT tie colors.)
= SCORE M2 x M2 EQUALS '5'
490
Apply M2 (Color) to coordinate SHIRT & JACKET colors against each other
Score 5 (out of 5, where 1 is highest) for Color Coordination
(Color clash High Contrast jacket colors vs. MT shirt colors.)
= SCORE M2 x M2 EQUALS '5'
495
Apply M3 (Special JACKET) to M1 (Profile)
Score 3 (out of 5, where 1 is highest) for Lapel Width
(because lapel should be wide to better coordinate with body proportions)
= TOTAL AVERAGE SCORE M3 x M1 EQUALS '3'
500
OVERALL TOTAL AVERAGE SCORE 3 ITEMS & PROFILE
= SUM OF ALL SCORES (28) DIVIDED BY NUMBER OF SCORES (11)
= '2.55' = '4' (bad)
[(M2TIE x M1) + (M2SHIRT x M1) + (M4 x M1) + (M5xM1) + (M6 x M1) + (M2 x M2) + (M2JACKET x M1) + M6 + (M2JACKET x M2TIE) + (M2JACKET x M2 SHIRT) + (M3 x M1)] / 11 = 2.55
510
600
> Base Color should ideally belong to MT Color sub group (for this profile MT)
> Accent Color should belong to MT group
> Accent Color should ideally be one of the complexion colors (tan, or blue, skin pink)
> Lapel should be wide
> Pattern should be one of the following (small diagonal or large dotted i.e. a subset of the pattern palette of 20 possible).

FIG. 3E

SYSTEM AND METHOD FOR COORDINATING AND EVALUATING APPAREL

RELATED APPLICATION

This application claims priority to U.S. Provisional Patent Application No. 61/248,132 filed Oct. 2, 2009, which is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

The claimed invention is directed to a computer-based system and method for coordinating apparel. More particularly, the claimed invention relates to an innovative system and method that allows a user to evaluate and coordinate apparel based on individual characteristics (a profile), characteristics of the apparel, or combinations of both.

OBJECT AND SUMMARY OF THE INVENTION

Applicant is unaware of any computer-based system, application and method for coordinating and evaluating apparel personalized for a specific individual based on the individual's unique physical characteristics.

The inventive system and method has many benefits including but not limited to:

- Providing a rapid means of evaluating whether an apparel item of interest coordinates well with an individual, other apparel items, or both;
- Providing a versatile system that allows the coordination of new apparel items with items already stored in the system;
- Providing a coordination system that considers the particulars of an individual's body coloring and proportions when providing a coordination assessment;
- Providing a versatile system that is ready-to-use in virtually any place and at virtually any time;
- Providing a systematic explanation for a recommendation meant to compliment a user's specific characteristics;
- Providing a system that can be independent of apparel sizing charts and systems, body measurements, or independent body scanning;
- Providing a system that allows on-the-go selection and evaluation of apparel items for third party profiles, (that is, a user can shop for apparel (and have it evaluated) for another individual, based on the individual's profile in the system);
- Providing a system that can be independent of the physical presence of the profiled individual;
- Providing a system that allows the storage of any apparel item for later reference and coordination;
- Providing a system that is useful for the selection of apparel items from an existing wardrobe as well as based on new items of interest.

The user may use the inventive system and method in alternate ways including but not limited to:

- Seeking shopping or dressing guidance for specific apparel. In one exemplary embodiment of the claimed invention, the user specifies the features of a particular apparel or accessory item (such as but not limited to a piece of clothing) by using either feature extraction from a digital photograph of the item taken and/or by manual input of all or part of those features, for example, by way of pre-defined multiple choice options. The features include but are not limited to the colors of the item, pattern, and some specific dimensions of the item such as but not limited to, the width and length of the item. The system then processes the input and offers a recommendation on how well the item under consideration suits the individual profile and potential other pieces of apparel.
- Seeking shopping or dressing guidance in general. In one exemplary embodiment of the claimed invention, the user specifies a profile and the type of apparel she intends to seek out in a store or in an existing wardrobe (either as a standalone item or in relation to other pieces of apparel she may input or select from information already stored in the system). The system then processes the input from the user and offers guidance and directive recommendations as to what range of colors and dimensions the user should seek in order to identify the apparel that coordinates best with the profile.
- Coordinating clothes independently of a profile. In another exemplary embodiment of the claimed invention, the system is able to evaluate, guide, and recommend how characteristics, such as colors, patterns, and proportions of several pieces of apparel and/or accessory items (collectively referred to herein as "apparel items") coordinate best without needing to consider the profile of a specific individual. In accordance with an exemplary embodiment of the claimed invention, when a user selects an apparel item (e.g., a shirt), the user can invoke the system without utilizing the user profile to recommend an accompanying apparel and/or accessory item (s) (e.g., suits, ties, belts, socks, etc.) that would be stylish and tasteful (coordinate) with the selected shirt or suit. Of course, if the user invokes the system to utilize the user profile, the system would provide a specific list of apparel/accessory item(s) that would coordinate well with the selected shirt given user's characteristics. In accordance with an aspect of the claimed invention, an apparel retailer can utilize this embodiment of the claimed invention to offer recommendation of accompanying apparel/accessory items to a customer purchasing an apparel item from its store or website.
- Enhancing an existing wardrobe. In another exemplary embodiment of the claimed invention, the system can guide and enable users to coordinate existing wardrobes in part or entirely in a personalized fashion meant to compliment unique individual profiles. The wardrobe information can be stored in the system, such as a database system that communicates with the system servers. The system can then the provide the user with specific recommendations on what coordinates best with a given profile and what additional items should be sought out or acquired to enhance the entire wardrobe.
- Sharing style and personalized fashion information and opinions. In yet another exemplary embodiment of the claimed invention, the inventive system provides a platform (such as a blog page), where a user or a user community can share style opinions, personalized fashion information opinions, or opinions on fashion in general.

In accordance with an exemplary embodiment of the claimed invention, a computer implemented method for coordinating and evaluating apparel/accessory items receives information about an apparel/accessory item for coordination from a user, calculates a coordination score of the apparel/accessory item by applying a plurality of predetermined rules to determine if the apparel/accessory item coordinates with one or more apparel/accessory items in a virtual wardrobe, and provides a recommendation of one or more apparel/accessory items in the virtual wardrobe based on the coordi-

nation score. The virtual wardrobe can be user's apparels/accessories or a retailer's stock of apparels/accessories for sale.

In accordance with an exemplary embodiment of the claimed invention, the method aforesaid further determines whether the apparel/accessory item compliments the user based on a profile of the user. The profile comprises at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, the virtual wardrobe comprises apparel/accessory items for sale on a retailer's website and the aforesaid method receives the apparel/accessory item selected by the user on the retailer's website.

In accordance with an exemplary embodiment of the claimed invention, a processor based server associated with the retailer's website communicates with a client device associated with the user over a communications network and transmits the recommendation of one or more apparel/accessory items to the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method determines whether one or more apparel/accessory items from the retailer's website compliment the user based on a profile of the user. The profile comprises at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, the server transmits a plurality of questions to generate the profile of the user to the client device over the communications network, receives answers entered on the client device by the user to the plurality of questions from the client device over the communications network, and stores the received answers to the plurality of questions in a database.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method calculates the coordination score by applying at least one of the following rules: a profile contrast rule, a profile proportions rule, an apparel color rule and an apparel pattern rule.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method calculates coordination scores of two apparel/accessory items to determine whether the two apparel/accessory items coordinate with each other.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives information about the apparel/accessory item entered on a client device by the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives entered information from the client device over a communications network by a processor based server and stores the entered information in a database.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives a digital photograph of the apparel/accessory item, and a process of a client device extracts features of the apparel/accessory item from the digital photograph.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method extracts from the digital photograph at least one of the following features of said apparel/accessory item: color, pattern, texture, length and width.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives a digital photograph of the apparel/accessory item by a processor based server from a digital camera of a client device over a communications network. The server extracts the features of the apparel/accessory item from the digital photograph.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives answers from the user to a plurality of questions to generate the profile of the user, and stores received answers to the plurality of questions in a storage device of a client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method generates a profile of another person to coordinate and evaluate apparel/accessory items in a virtual wardrobe associated with the other person, and stores the profile of the other person in the storage device of the client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method transmits a plurality of questions to a client device associated with said user to generate said profile of said user over a communications network by a processor based server; and receiving answers entered on said client device by said user to said plurality of questions over said communications network by said server; and storing received answers to the plurality of questions in a database.

In accordance with an exemplary embodiment of the claimed invention, a client device associated with the user generates the virtual wardrobe of the user based on information received relating to a plurality of apparel/accessory items of the user, and the aforesaid method stores the virtual wardrobe in the storage device of the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method receives answers from the user to a plurality of questions to generate the virtual wardrobe, and stores the received answers to the plurality of questions in the storage device of the client device.

In accordance with an exemplary embodiment of the claimed invention, a process based server generates the virtual wardrobe of the user based on information received relating to a plurality of apparel/accessory items of the user from a client device associated with the user over a communications network, and the aforesaid method stores the virtual wardrobe in a database.

In accordance with an exemplary embodiment of the claimed invention, the server transmits a plurality of questions to the client device to generate the virtual wardrobe over the communications network by said server, and receives answers entered on the client device by the user to the plurality of questions from the client device over said communications network. The aforesaid method stores received answers to the plurality of questions in the database.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method stores the apparel/accessory item in the virtual wardrobe associated with the user if the apparel/accessory item is acquired by the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid method provides a sliding coordination score and a summary based on the coordination score to the user.

In accordance with an exemplary embodiment of the claimed invention, the server searches Internet or third-party database for an accompanying apparel/accessory item that

coordinates with one or more apparel/accessory items in the virtual wardrobe of the user and transmits the accompanying apparel/accessory item to the client device over the communications network.

In accordance with an exemplary embodiment of the claimed invention, the server searches Internet or third-party database for an accompanying apparel/accessory item that compliments the user based on the profile of the user and transmits the accompanying apparel/accessory item to the client device over the communications network by the server.

In accordance with an exemplary embodiment of the claimed invention, a non-transitory computer readable medium comprises computer executable code for coordinating and evaluating apparel/accessory items. The comprises instructions for receiving information about an apparel/accessory item for coordination from a user, calculating a coordination score of the apparel/accessory item by applying a plurality of predetermined rules to determine if the apparel/accessory item coordinates with one or more apparel/accessory items in a virtual wardrobe, and providing a recommendation of the one or more apparel/accessory items in the virtual wardrobe based on the coordination score. The virtual wardrobe can be user's apparels/accessories or a retailer's stock of apparels/accessories for sale.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code comprises instructions for determining whether the apparel/accessory item compliments the user based a profile of the user, the profile comprising at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, wherein the virtual wardrobe comprises apparel/accessory items for sale on a retailer's website, and the aforesaid code further comprises instructions for receiving the apparel/accessory item selected by the user on the retailer's website.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for communicating with a client device associated with the user over a communications network by a processor based server associated with the retailer's website; and transmitting the recommendation of the one or more apparel/accessory items to the client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for determining whether the one or more apparel/accessory items from the retailer's website compliment the user based on a profile of the user, the profile comprising at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for transmitting a plurality of questions to generate the profile of the user to the client device over the communications network by the server; receiving answers entered on the client device by the user to the plurality of questions from the client device over the communications network by the server; and storing received answers to the plurality of questions in a database.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for calculating the coordination score by applying at least one of the following rules: a profile contrast rule, a profile proportions rule, an apparel color rule and an apparel pattern rule.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for calculating coordination scores of two apparel/accessory items to determine whether the two apparel/accessory items coordinate with each other.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving information about the apparel/accessory item entered on a client device associated with the by the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for transmitting entered information to a processor based server for processing and storage in a database over a communications network by the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving a digital photograph of the apparel/accessory item and extracting features of the apparel/accessory item from the digital photograph by a processor of the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for extracting form the digital photograph at least one of the following features of the apparel/accessory item: color, pattern, texture, length and width.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for transmitting a digital photograph of the apparel/accessory item to a processor based server for extracting features of the apparel/accessory item from the client device over a communications network.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving answers from the user to a plurality of questions to generate the profile of the user; and storing received answers to the plurality of questions in a storage device of a client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for generating a profile of another person to coordinate and evaluate apparel/accessory items in the virtual wardrobe associated with the other person; and storing the profile of the other person in the storage device of the client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving a plurality of questions to generate the profile of the user from a processor based server over a communications network by a client device associated with the user; transmitting answers entered on the client device by the user to the plurality of questions to the server for processing and storage in a database over the communications network by the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for generating the virtual wardrobe of the user by a client device associated with the user based on information received relating to a plurality of apparel/accessory items of the user; and storing the virtual wardrobe in the storage device of the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises

instructions for receiving answers from the user to a plurality of questions to generate the virtual wardrobe of the user by the client device; and storing received answers to the plurality of questions in the storage device of the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for transmitting information relating to a plurality of apparel/accessory items of the user to a processor based server to generate and store the virtual wardrobe of the user in a database over a communication network by a client device associated with the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving a plurality of questions from the server over the communications network by the client device; and transmitting answers entered on the client device by the user to the plurality of questions to the server for processing and storing in the database over the communications network by the client device.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for storing the apparel/accessory item in the virtual wardrobe associated with the user if the apparel/accessory item is acquired by the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for providing a sliding coordination score and a summary based on the coordination score to the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving an accompanying apparel/accessory item that coordinates with the one or more apparel/accessory items in the virtual wardrobe from the server over the communications network by the client device, the accompanying apparel/accessory item selected from a third-party database or an Internet search by the server.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid code further comprises instructions for receiving an accompanying apparel/accessory item that compliments the user based on the profile of the user from the server over the communications network by the client device, the accompanying apparel/accessory item selected from a third-party database or an Internet search by the server.

In accordance with an exemplary embodiment of the claimed invention, a system and method for coordinating and evaluating apparel/accessory items comprises a processor based client device and a processor based server. The client device receives information about an apparel/accessory item for coordination from a user. The server receives the information about the apparel/accessory item from the client device over a communications network. The server calculates a coordination score of the apparel/accessory item by applying a plurality of predetermined rules to determine if the apparel/accessory item coordinates with one or more apparel/accessory items in the virtual wardrobe. The server transmits a recommendation of one or more apparel/accessory items in said virtual wardrobe based on the coordination score. The virtual wardrobe can be user's apparels/accessories or a retailer's stock of apparels/accessories for sale.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server determines whether the apparel/accessory item compliments the user based a profile of the user. The profile comprises at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid virtual wardrobe comprises apparel/accessory items for sale on a retailer's website and the client device transmits the apparel/accessory item selected by the user on the retailer's website to the server.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server is associated with the retailer's website and transmits the recommendation of the one or more apparel/accessory items from the retailer's website to the client device over the communications network.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server determines whether the one or more apparel/accessory items from the retailer's website compliment the user based on a profile of the user. The profile comprising at least one of the following user's characteristics: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server transmits a plurality of questions to generate the profile of the user to the client device over the communications network and receives answers entered on the client device by the user to the plurality of questions from the client device over the communications network. A database stores received answers to the plurality of questions.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server calculates the coordination score by applying at least one of the following rules: a profile contrast rule, a profile proportions rule, an apparel color rule and an apparel pattern rule.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server calculates coordination scores of two apparel/accessory items to determine whether the two apparel/accessory items coordinate with each other.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server receives information about the apparel/accessory item entered on the client device by the user from the client device over a communications network, and a database stores the entered information.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server receives a digital photograph of the apparel/accessory item from a digital camera of the client device over the communications network and extracts features of the apparel/accessory item from the digital photograph.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server extracts from the digital photograph at least one of the following features of the apparel/accessory item: color, pattern, texture, length and width.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server transmits a plurality of questions to the client device to generate the profile of the user over the communications network and receives answers entered on the client device by the user to the plurality of questions over the communications network. The aforesaid system further comprises a database for storing received answers to the plurality of questions.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server generates the virtual wardrobe of the user based on information received relating to a plurality of apparel/accessory items of the user from the

client device over the communications network, and the aforesaid system further comprises a database for storing the virtual wardrobe.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid client device receives a plurality of questions from the server over the communications network and transmits answers entered on the client device by the user to the plurality of questions to the server for generating the virtual wardrobe of the user based on the answers. The aforesaid database stores answers and the virtual wardrobe in the database.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server stores the apparel/accessory item in the virtual wardrobe of the user if the apparel/accessory item is acquired by the user.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid client device receives a sliding coordination score and a summary based on the coordination score from the server over the communications network.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server searches Internet or third-party database for an accompanying apparel/accessory item that coordinates with the one or more apparel/accessory items in the virtual wardrobe of the user and transmits the accompanying apparel/accessory item to the client device over the communications network.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid server searches Internet or third-party database for an accompanying apparel/accessory item that compliments the user based on the profile of the user and transmits the accompanying apparel/accessory item to the client device over the communications network.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid client device is a network enabled device comprising a digital camera.

In accordance with an exemplary embodiment of the claimed invention, the aforesaid client device is one of the following: a cell phone, a smartphone, a laptop, a netbook, a tablet PC, a mobile wireless device, a personal digital assistant (PDA).

Various other objects, advantages and features of the present invention will become readily apparent from the ensuing detailed description, and the novel features will be particularly pointed out in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The following detailed description, given by way of example, and not intended to limit the claimed invention solely thereto, will best be understood in conjunction with the accompanying drawings in which:

FIG. **1** is a network incorporating the system supporting the claimed invention and a block-diagram of the major aspects of said system according to an exemplary embodiment of the claimed invention;

FIGS. **2**A-**2**H are flow charts illustrating an exemplary process for coordinating in accordance with an exemplary embodiment of the claimed invention; and

FIGS. **3**A-**3**E are high-level logical step charts illustrating exemplary processes for scoring coordination apparel potential in accordance with an exemplary embodiment of the claimed invention.

DETAILED DESCRIPTION OF THE EMBODIMENTS

The claimed invention is directed to an evaluation and coordination processing system that acts as a personal, portable stylist, that is capable of uniquely evaluating and coordinating apparel and accessories or combinations thereof in light of the characteristics of an individual, the characteristics of apparel items themselves, or a combination of both. Characteristics of an individual that may be considered by the system include but are not limited to: a person's facial complexion, body proportions, face shape, neck shape, shoulder to waist ratio, hair color, eye color, and the like. Characteristics of apparel or accessories that may be considered by the system include but are not limited to, the color, the patterns, the width, the length, and the like. According to one exemplary embodiment of the claimed invention, the system coordinates an item of apparel or accessory (collectively referred to herein as an "apparel") with an individual profile according to a set of rules from which it generates coordination scores. In another exemplary embodiment of the claimed invention, the inventive system allows users on-the-go to uniquely coordinate clothing, or other apparel or accessories, either with other apparel or with the characteristics of an individual as set forth in the individual profile. The system can generate coordination based on various factors including but not limited to: color, contrast, and proportion.

Generally, in accordance with an exemplary embodiment of the claimed invention, the application can be activated on a processor-based communication device that comprises a camera (such as a cellphone or personal digital assistant), although the system may also be activated on any processor-based communication device—even without a camera. In an exemplary embodiment of the claimed invention, the system **1000** can store one or more individual profiles inputted by the user that specify various characteristics, such as but not limited to complexion colors (hair color, skin color, eye color and the like), bodily proportions (shoulder to hip ratio, size, weight and the like) and physical features (shape of face and neck and the like). The system **1000** can also store one or more apparel items inputted by the user. The user can input the information either by sending a digital picture of the person or item from which the system **1000** can extract characteristics or by entering data regarding the person or item. The system **1000** can store the individual profile and apparel items separately and may further link various apparel or accessory items to individual profiles. In another embodiment of the claimed invention, pictures can be taken on-the-go by a network enabled device **1200** comprising a digital camera **1210** which then transmits the picture to the inventive system.

Generally in one exemplary embodiment of the claimed invention, the inventive system and method will consider and evaluate this data by consulting database matrices that comprise the data in light of a set of rules, to perform calculations that generate scores associates with the items being analyzed. The system **1000** then uses these scores to compare and coordinate aspects of the apparel with those of an individual profile or of other apparel based on various factors including but not limited to color systems, ranges, harmonics, body color, proportion charts, and the like. The system **1000** essentially sorts, organizes, and evaluates the appropriateness of the coordination of the apparel or accessories based on the generated scores which indicate, on a sliding scale, an excellent to a less desirable selection. As mentioned above, the evaluated coordination can be for a variety of elements, including but not limited to the appropriateness of a preselected piece of apparel (such as a tie and shirt with each other), as well as the appropriateness of pieces of apparel with a particular individual that takes into consideration the specific dimensions of the particular individual. The system **1000** then can propose recommendations by applying the rules that coordinate characteristics of the apparel, such as but not lim-

ited to colors, textures, patterns, and proportions, to the individual profile information or other apparel information.

With reference to the Figures, further exemplary embodiments of the claimed invention are now described in greater detail. Although the description includes exemplary embodiments of the claimed invention, it can be easily seen that other embodiments are possible, and changes can be made to the embodiments described without departing from the spirit of the disclosed system and method.

The claimed system and method can be implemented using software, hardware, or a combination of hardware and software. Particularly, the inventive system and methods can be implemented using processor-based network enabled devices **1200** within a network of multiple computers or processor-based servers in local area networks, wide area networks, wireless telecommunication networks, intranets or the Internet, and the like. The claimed inventive application can be implemented using either object-oriented programming languages, like the JAVA™ and C++ programming languages, or procedural programming languages such as the C programming language, or any other known type of computer language. JAVA is a registered trademark of Sun Microsystems, Inc. Preferably, the claimed system and method are implemented as an application for processor-based network enabled devices **1200** comprising cameras **1210**, the application either downloaded on to the device **1200** or being accessible through the telecommunications network **1400** or Internet **1400** to multiple end user network enabled devices **1200**, e.g. cell phones, smartphones, laptops, netbooks, tablet PC, mobile wireless devices, personal digital assistants (PDA), and any other network enabled devices. It will be understood, however, that the claimed system and method can be implemented as a web application, the application being accessible through the Internet by processor-based communication devices **1200**, including but not limited to laptops, desktops, personal digital assistants, smart phones and the like.

Referring now to FIG. **1**, there is shown a system configuration in which the claimed system and method can operate and a block diagram showing the major modules that support the claimed invention according to an exemplary embodiment of the claimed invention. In alternate embodiments of the claimed invention, however, various other types of electronic devices **1200** communicating in a network can also be used and various other modules can be included as would be well understood by those of skill in the art. In such an exemplary embodiment of the claimed invention, a user **1500** communicates through a network enabled communication device, such as but not limited to processor based network enabled device **1200** comprising a camera **1210**, with a computer environment, which can include a processor-based server **1100** or multiple processor-based server computers **1100** in a client/server relationship on a communications network **1400** such as the Internet. In a typical client/server environment, server **1100** includes an application that communicates with a processor-based network enabled device **1200**, which can be a hand-held or portable network enabled electronic device (such as a personal digital assistant, a mobile wireless phone or smart phone, or any other web-enabled electronic device as would be understood by those of skill in the art.

The system **1000** can be any type of electronic transmission medium, for example, including but not limited to the following networks: a telecommunications network, a wireless network, a virtual private network, a public internet, a private internet, a secure internet, a private network, a public network, a value-added network, an intranet, a wireless gateway, or the like. The term "virtual private network" refers to a secure and encrypted communications link between nodes on the system **1000**, a Wide Area Network (WAN), Intranet, the communications network **1400** or any other network transmission methods. In addition, the connectivity to the communications network **1400** may be via, for example, by cellular transmission, Ethernet, Token Ring, Fiber Distributed Datalink Interface, Asynchronous Transfer Mode, Wireless Application Protocol, or any other form of network connectivity. A user device **1200** can connect to the system **1000** by use of a network interface card or device **1220** that resides in the processor-based network enabled device **1200**. It further shall be noted that in an alternate embodiment, the inventive application can be downloaded and utilized directly on the local user device, such as but not limited to network enabled device **1200**. Moreover, in accordance with an embodiment of the claimed invention, the computer-based methods for implementing the claimed invention are implemented using processor-executable instructions for directing operation of a device or devices under processor control, the processor-executable instructions can be stored on a tangible computer-readable medium, such as but not limited to a disk, CD, DVD, flash memory, portable storage or the like. The processor-executable instructions can be accessed from a service provider's website or stored as a set of downloadable processor-executable instructions, for example or downloading and installation from an Internet location (e.g. Web server).

In an exemplary embodiment of the claimed invention, server **1100** comprises various management hardware or software components for managing the inventive application. It will be understood that these components may be hardware-based, software-based, or a combination of both. Although the term server is used, the components therein do not necessarily need to reside at a common location, neither do any of the parts of a particular component. Server **1100** can comprise a database **1300** which stores all necessary information for properly executing the processes of the claimed invention. Of course, it will be understood by those of skill in the art, that database **1300** may also be remotely connected to server **1100** via the network **1400**, or alternatively that some databases **1300** are local with the server **1100** and others are remote. As would be well known to those of skill in the art, devices other than the hardware configurations described above can be used to communicate with server **1100**. Furthermore, it is also within the spirit of the claimed invention for the application or portions thereof to reside entirely on the network enabled device **1200**, running locally on the device **1200**.

The server **1100** comprises various management hardware or software components for executing the application. In an exemplary embodiment of the claimed invention, these components include: a processing manager **1110**, a profile manager **1120**, an apparel manager **1130**, and a coordinator **1140**. Each manager will be described and then referred to in the operation of an embodiment of the claimed invention with respect to FIGS. **2**A-**2**H.

In an exemplary embodiment of the claimed invention, the processing manager **1110** acts as an interface between the user **1500** and the inventive application on the server **1100** by routing data to and from the user and calling the various application managers based on input from the user **1500**.

In an exemplary embodiment of the claimed invention, the profile manager **1120** is responsible for the generation and management of individual profiles. In accordance with an aspect of the claimed invention, the profile manager **1120** is a java class that handles the generation of a profile and accessibility of the profiles.

The profile manager **1120** presents various questions to the user **1500** to generate a profile through the network enabled device **1200** regarding the characteristics of a particular indi-

vidual, including but not limited to: hair color, complexion, proportion sizes, and the like. The profile manager **1120** then receives this data from the user **1500** through the network enabled device **1200**. The profile manager **1120** then generates the profile and stores the requisite information for each profile in the database **1300**. In accordance with an exemplary embodiment of the claimed invention, the user **1500** can take a digital photo of herself or another individual using the camera **1210** and can then transmit the digital photo to the application on the server **1100** via the network enabled device **1200**. The profile manager **150** then receives the digital photograph and can extract the requisite characteristic information from the photograph to create the profile using digital photo extraction algorithms. To verify the accuracy of the extracted information, the profile manager **1120** can provide verification questions to the user **1500** through the network enabled device **1200**, such as multiple choice input questions.

If the user **1500** elects to associate or coordinate an item of apparel with a particular profile, the profile manager **1120** retrieves the associated profile from database **1300** and updates the profile with the information. For example, in an exemplary embodiment of the claimed invention, one of the profiles in the system **1000** is designated as the "Active Profile" by the profile manager **1120**—that is, the Profile that is currently being accessed by the user **1500** on the network enabled device **1200**. The profile manager **1120** can hold the profiles in an indexed array and the profile manager **1120** can change the "Active Profile" designation in the array.

The apparel manager **1130** is responsible for the storing of apparel and accessory data and the management thereof. Specifically, in accordance with an exemplary embodiment of the claimed invention, the apparel manager **1130** is a java class that handles the storing of apparel items, analyzes characteristics of apparel items, the association of apparel and retrieves a piece of apparel for analysis.

A user **1500** can store apparel items to be used for coordination in the database **1300**. These apparel items can be new apparel items or apparel items in an already existing wardrobe. In accordance with an exemplary embodiment of the claimed invention, the network enabled device **1200** can transmit user's digital photo of the apparel item to the server **1100** via network **1400**. The apparel manager **1130** then receives the digital photograph and can store it in the database **1300** for use with either all or some of the profiles. In accordance with an aspect of the claimed invention, apparel manager **1130** can communicate with the profile manager **1120** to associate the apparel item with a particular profile or profiles, i.e. as part of a virtual "wardrobe" belonging to a profiled individual. The apparel manager **1130** can further extract characteristics of the apparel item such as but not limited to its color, pattern, and dimensions, by using digital extraction algorithms, and store that information in the database **1300** for use by the coordinator manager **1140**. To verify the accuracy of the extracted information, the apparel manager **1130** can provide verification questions to the user **1500** through the network enabled device **1200**, such as multiple choice questions. Alternatively, the apparel manager **1130** can save apparel item characteristics without a photograph by presenting various questions through the network enabled device **1200** regarding the characteristics of the particular apparel item. The apparel manager **1130** then receives this data from the user **1500** through the network enabled device **1200**. The apparel manager **1130** then stores the apparel item in the database **1300**.

In accordance with an exemplary embodiment of the claimed invention, the apparel manager **1130** parses the image colors (by pixel) of the image (i.e., the digital photo of the apparel item) to find the most widely used colors in the image. Although the apparel manager **1130** is shown to reside in the server **1100** in FIG. **1**, the apparel manager **1130** can easily reside in the processor-based network enabled device **1200**. The apparel manager **1130** converts the RGB (red, green blue) color matches into LAB color space, a color-opponent space with dimension L for lightness, "a" and "b" for the color-opponent dimensions. The apparel manager **1130** compares the LAB colors to the colors in the palette of the imaged garment, and then selects the most closely related colors from the image as compared to the garment color palette.

In accordance with an exemplary embodiment of the claimed invention, once the data of the apparel has been either inputted by the user **1500** or extracted from a digital photograph, the apparel manger **1130** can analyze and store particular characteristics of that piece of apparel. For example, such characteristics can include but are not limited to, its size, patterns, color, and the like.

In accordance with an exemplary embodiment of the claimed invention, should the user **1500** elect to associate or coordinate an item of apparel with a particular profile, the apparel manager **1130** sends a request to the profile manager **1120** and passes the requisite data to the profile manager **1130** for the association.

In accordance with an exemplary embodiment of the claimed invention, the apparel manager **1130** receives a request from the user **1500** through the network enabled device **1200** to retrieve a particular piece of apparel for analysis. The apparel manager **1130** retrieves the selected item from the database **1300** or extracts data from the digital photo of an item of apparel and passes on the requisite data associated therewith to the coordinator **1140**.

In accordance with an exemplary embodiment of the claimed invention, the coordination or quality score can range from 0 to 10 where 10 is the best score. The coordinator **1140** bestows a quality score for each rule applied. It is appreciated that the scoring by the coordinator **1140** can be all or nothing, gradual or weighted, penalizing at the extremes or giving bonuses, depending on how a specific rule is formulated and applied. For example, the coordinator **1140** can apply bonus rule for profile colors echoed in the clothing's color composition of base colors and accent colors. That is, in accordance with an exemplary embodiment of the claimed invention, the coordinator **1440** can award 5 points out of 10 possible bonus points if there is silver or light gray featured in the clothing for a person with black-gray hair, and additional 3 bonus points if there is an additional echo of the person's or wearer's blue eyes in a blue accent color of the tie. In accordance with an exemplary aspect of the claimed invention, each garment receives a quality score which can be an average or weighted sum of all rules applied to the garment. The weighted sum can be based on the importance of a rule.

In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** uses the data stored in the database **1300** to perform the coordination analysis. Specifically, coordinator **1140** receives a request from the user **1500** through the network enabled device **1200** to coordinate either: an item of apparel with a profile; an item of apparel with other apparel; or a combination of both. The coordinator **1140** then requests the requisite data from the database **1300** and applies a set of rules to provide a particular coordination score, as further described below with respect to an exemplary embodiment of a process of the claimed invention, shown in FIGS. **2**A-**2**H.

In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** coordinates an item

of apparel specified by the user **1500** through the network enabled device **1200** with a profile also specified by the user **1500**. The coordinator **1140** receives the profile data from the profile manager **1120** or alternatively retrieves the profile data directly from the database **1300**. The coordinator **1140** receives the apparel data from the apparel manager **1130** or alternatively retrieves the apparel data from the database **1300**. It then begins applying a set of rules to perform the analysis as explained below.

In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** applies a set of rules to calculate the quality or coordination score for the particular coordination request. The coordination score can denote aesthetic quality of an individual apparel item (i.e., a garment) or an ensemble. These rules include but are not limited to predetermined rules, sets of knowledge data and fuzzy logic, dynamic rules, and the like that establish relationships between a set of matrices reference look-up tables (for characteristics including but not limited to colors, shade, tints, tones, patterns, and the like) and rules in order to provide recommendations for apparel, accessories, and profiles. In an exemplary embodiment of the claimed invention, the system **1000** scores various correspondences and relationships separately using a gradual scale from best to worst in order to properly evaluate the various elements of the system. Exemplary rules include but are not limited to the following, which are merely examples that can be adopted in whole, in part, or not at all:

a) Profile Contrast Rules: In accordance with an exemplary embodiment of the claimed invention, for a given color combination of hair, facial hair, skin, and eye colors, the coordinator **1140** categorizes the individual's type of complexion as one of four types of personal contrast in descending order: high contrast, medium contrast, light-bright, and muted (tonal) based on the profile contrast rules.

b) Profile Proportions Rules: In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** considers the specific dimensions including but not limited to: relation or shoulder width to hip width; shoulder slope; weight; face shape; neck length and the like. Exemplary profile proportion rules include but are not limited to the following which are merely examples that can be adopted in whole, in part, or alternatively:

1) The bulkier or wider the dimensions, the wider the proportions for relevant aspects of specific types of apparel (e.g. tie width of tie) is preferred. Conversely, the leaner or narrower the dimensions, the slimmer or smaller proportions for relevant aspects of specific types of apparel is preferred.
2) The bulkier or wider the profile dimensions, the wider the tie is recommended.
3) For a taller person, a longer tie is recommended.
4) The bulkier or wider the profile dimensions of the profile, the wider the jacket lapel is recommended.
5) The longer the neck in the profile, the higher the shirt collar is recommended.
6) The wider the face in the profile, a longer shirt collar point is recommended.
7) The wider the face, a narrower shirt collar spread is recommended.

c) Apparel Color Rules: The coordinator **1140** can employ the exemplary apparel color rules including but not limited to the following which are merely examples that can be adopted in whole, in part, or alternatively:

1) The set of all possible colors is divided into four subsets (that may overlap) of colors that coordinate best with each of the four profile contrast types.
2) The more colors of one or more apparel items belonging to the same subset as the corresponding recommended profile contrast type, the higher the color score. Conversely, the less colors of one or more apparel items belonging to the same subset as the corresponding recommended profile contrast type, the lower the color score.
3) Points will be allotted if one or more of the colors of the personal contrast profile are also featured in the colors of the apparel item or items under consideration. Conversely, if none of the personal color profile is featured the score will be neutral, but not negative.
4) The set of all possible colors is divided into several subsets (that may overlap) of colors that coordinate best with each other (harmonics such as color complementarities, etc.). Each type of harmonics corresponds to one or several or all of the four profile contrast types.
5) If all the colors present in each apparel item belong to at least one of the harmonics types coordinating best with the profile contrast type applied, the score for color coordination is highest. The less colors belonging to the intersection of profile contrast type colors and recommended harmonic colors, the lower the color coordination score.
6) If all the colors present in all apparel items belong to at least one of the harmonics types coordinating best with the profile contrast type applied, the score for color coordination is highest. The less colors belong to the intersection of profile contrast type colors and recommended harmonics colors, the lower the color coordination score.

d) Apparel Pattern Rules. In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** groups the patterns in a limited variety of twenty different types and considers the patterns purely as pattern and not as color or shade. Exemplary apparel pattern rules include but are not limited to the following which are merely examples that can be adopted in whole, in part, or alternatively:

1) The bulkier or wider the personal profile dimensions, very fine or tiny patterns are not recommended. Conversely, the leaner or smaller the profile dimensions, very large patterns are not recommended. Otherwise, the presence of a single pattern is not further evaluated.
2) In the presence of two patterns in an outfit, if the two patterns are of a different type (e.g. stripes and dots), a minimal difference in scale between the two patterns scores best.
3) In the presence of two patterns in an outfit, if the two patterns are of the same type, a maximal difference in scale is best (e.g. fine stripes and very broad stripes).
4) In the presence of three patterns in an outfit, if the three patterns are of a different type (e.g. stripes and dots and flower print), a careful difference in scale among the three patterns scores best.)
5) In the presence of three patterns in an outfit, if two out of the three patterns are of the same type, a significant difference in scale is scored best for the same pair (e.g. fine stripes and very broad stripes). The third pattern has to be significantly different from the other patterns, yet resemble or echo both of the in terms of color or shape.
6) In the presence of three patterns in an outfit, if the three patterns are of the same type (e.g. stripes), a maximal difference in scale among the three patterns scores best.
7) The proper coordination of more than three patterns in an outfit is art. The system does not evaluate those combinations (or assigns a neutral given the degree of difficulty of getting that right).

In accordance with an exemplary embodiment of the claimed invention, should a coordination score be toward the low end, the coordinator **1140** can search through the database **1300** for apparel items that would be a better match. The coordinator **1140** can also include a bot, spider, or crawler program that will search the Internet or third-party database for images or descriptions that include apparel characteristics that would coordinate well with the profile, apparel, or combination thereof at issue. The coordinator **1140** can also search a third-party apparel database for apparel that would coordinate well with the profile, apparel, or combination thereof at issue.

In accordance with an exemplary embodiment of the claimed invention, the inventive system and related inventive processes accomplish at least the following: 1) creating a user profile; 2) storing a new apparel item; 2) coordinating new apparel with profile; 3) coordinating old apparel with profile; 3) coordinating new apparel with additional new apparel and profile; 4) coordinating new apparel with old apparel and profile; 5) coordinating old apparel with old apparel and profile; 5) coordinating new apparel with new apparel; 6) coordinating new apparel with old apparel; and 7) coordinating old apparel with old apparel.

In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** applies a set of rules to calculate a skill score which denotes a degree of difficulty or skill required to compose an outfit (i.e., an ensemble). The skill score is an absolute number which can vary by the number of rules applied and how well the user (e.g., the proposed ensemble coordinator) has conform to those rules. In contrast to the coordination score, the skill score is a sum (and not an average) of scores of all individual rules applied to a particular ensemble. Typically, an outfit with lots of patterns pose a greater challenge to the wearer. Consequently, the coordinator **1140** applies more set of rules, specifically more complex set of rules, which can challenge the knowledge and skill of the wearer or the ensemble coordinator. Unless the wearer has certain apparel expertise, it is hard to correctly match or coordinate three (3) or more stripe patterns in a single outfit. To coordinate three stripe patterns, the outfit should comprise garments having stripes of different scale. It should be appreciated that this does not mean that the wearer of an outfit comprising nearly solid color garments will look aesthetically worse than the wearer of a four (4) pattern outfit. It just means that less skill is required to coordinate solid color outfit than a pattern outfit. That is, two perfectly composed or coordinated outfits (one all solids and the other all patterns) can both obtain a coordination score of 10, but the all pattern outfit will receive a higher skill score than the all solid outfit. This enables the users **1500** of the system **1000** to educate themselves with regard to better dressing style, better ensemble selection and coordination. Additionally, users **1500** can use the skill scores to compare their ensemble coordination skills with each other.

An exemplary embodiment of the inventive system and related inventive processes are now described with respect to FIGS. **2**A-**2**H. As exemplary shown in step **1** of FIG. **2**A, the inventive system **1000** can be used by the user to generate and store an individual profile. Specifically, the network enabled device **1200** transmits a user request to the server **1100** through the network **1400** to generate a profile. The processing manager **1110** routes the request to profile manager **1120** which presents multiple-choice inquiries on the network enabled device **1200** regarding the profile characteristics. For example the network enabled device **1200** can present the following multiple choice queries to the user: hair color; skin color; eye color; weight; shoulder/hip ratio: equal; shoulder slope: average; face shape: average; neck shape: long. Of course other parameters can be presented as well. In response to the inquiry the network enabled device **1200** may receive and transmit the following exemplary responses from the user to the processing manager **1110** of the server **1100** over the network **1400**: 1) hair color: dark blond; 2) skin color: fair and ruddy; 3) eye color: blue; 4) weight: 210 lb; height: 6'2"; 5) shoulder/hip ratio: equal; 6) shoulder slope: average; 7) face shape: average; 8) neck shape: long. The information received by the processing manager **1110** is routed to the profile manager **1120**. The profile manager **1120** then generates the profile and stores it in database **1300**.

In steps **2** and **3** of FIG. **2**A, for example, when the user **1500** identifies a shirt and tie of interest, the user **1500** launches the application through the network enabled device **1200** and the network enabled device **1200** offers one or more user interfaces for enabling the user to enter information and/or a photograph of an apparel item of interest. The processing manager **1110** of the server **1100** receives the request (the information and/or photograph of the apparel item of interest) from the network enabled device **1200** and routes it to the apparel manager **1130** for processing. Preferably, the request includes photographs of each apparel item, i.e. a shirt and a tie of interest which is transmitted to the server **1100**. The apparel manger **1130** then stores the information and/or a photograph(s) in the database **1300**.

In step **4** of FIG. **2**B, the processing manager **1110** receives a request from the network enabled device **1200** to coordinate the tie and shirt in light of the profile. In step **5** of FIG. **2**B, the apparel manager **1130** receives the request and extracts characteristics of the tie and the shirt including their base color, accent colors, and pattern features, using digital extraction algorithms. Of course, in an alternate embodiment of the claimed invention this data can be entered by the user as well, rather than extracted. The apparel manager **1130** then provides multiple choice questions regarding the extracted information to the network enabled device **1200** for the user to confirm. In step **6** of FIG. **2**B, the network enabled device **1200** transmits the user's responses to the confirmation requests regarding the extracted information. In step **7** of FIG. **2**B, the apparel manager **1130** gathers additional information regarding the apparel items on the type of garment and the specific dimensions of the garment, by transmitting additional multiple choice questions to the network enabled device **1200** through the network **1400**. In step **8** of FIG. **2**B, the network enabled device **1200** transmits the user responses to the processing manager **1110** over the network **1400** which routes the data to the apparel manager **1130** for processing.

In step **9** of FIG. **2**C, the apparel manager **1130** requests coordination of the data of the two apparel items from the coordinator **1140**. The coordinator **1140** then performs multiple calculations and analyzes the data based on the data rules stored in database **1300** to score the coordination. In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** can utilize the exemplary high-level logic tables provided in FIGS. **3**A-**3**E to analyze the data to calculate the score. In step **10** of FIG. **2**C, the coordinator **1140** transmits to the network enabled device **1200** associated with the user **1500** a short summary of the recommendation and a detailed version thereof with the coordination score. In step **11** of FIG. **2**D, the network enabled device **1200** transmits a request to store the apparel item in the user's digital wardrobe in the database **1300**, if the user acquires or purchases the apparel item(s) of interest. In step **12** of FIG. **2**D, the database **1300** stores the data such that it is associated with the user **1500**. Specifically, the processing manager **1130** receives the request and routes it to the apparel manager **1130**.

The apparel manager **1130** then stores the apparel data in the database **1300**. The apparel manager **1130** stores the user's wardrobe on remote servers **1100** and can apply the same unique guidance and recommendations on all stored items in order to optimize the recommended use of the existing wardrobe as well as suggesting automatically or upon request new apparel items or accessories that ideally compliment the wardrobe and the user profile.

In steps **13** and **14** of FIG. **2**D, when the user **1500** goes shopping (or searches his wardrobe) and identifies a jacket of interest, the user **1500** can launch the application through the network enabled device **1200** and the network enabled device **1200** offers one or more user interfaces for enabling the user to enter information and/or a photograph of an apparel item of interest. The processing manager **1110** receives the request (the information and/or photograph of the apparel item of interest) from the network enabled device **1200** and routes it to the apparel manager **1130** for processing. Preferably, the request includes photographs of each apparel item, i.e. a shirt and a tie of interest which is transmitted to the server **1100**. The apparel manger **1130** then stores the information and/or a photograph(s) in the database **1300**.

In step **15** of FIG. **2**E, the processing manager **1110** receives a request from the network enabled device **1200** to coordinate the jacket with the already stored tie and shirt in light of the profile. In step **16** of FIG. **2**E, the apparel manager **1130** receives the request and extracts characteristics of the jacket including their base color, accent colors, and pattern features, using digital extraction algorithms. Of course, in an alternate embodiment of the claimed invention this data can be entered by the user as well, rather than extracted. The apparel manager **1130** then provides multiple choice questions regarding the extracted information to the network enabled device **1200** for the user to confirm. In steps **16** and **17** of FIG. **2**E, the network enabled device **1200** transmits the user's responses to the confirmation requests regarding the extracted information. In step **18** of FIG. **2**E, the apparel manager **1130** gathers additional information regarding the apparel items on the type of garment and the specific dimensions of the garment, by transmitting additional multiple choice questions to the network enabled device **1200** through the network **1400**. In step **19** of FIG. **2**E, the network enabled device **1200** transmits the user responses to the processing manager **1110** over the network **1400** which routes the data to the apparel manager **1130** for processing.

In step **20** of FIG. **2**F, the apparel manager **1130** requests coordination of the data of the three apparel items in light of the profile from the coordinator **1140**. The coordinator **1140** then performs multiple calculations and analyzes the data based on the data rules stored in the database **1300** to score the coordination. In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** can utilize the exemplary high-level logic tables provided in FIG. **3**A-**3**E to analyze the data calculator the score. In step **21** of FIG. **2**F, the coordinator **1140** transmits to the network enabled device **1200** associated with the user **1500** a short summary of the recommendation and a detailed version thereof with the coordination score.

In step **22** of FIG. **2**G, the user **1500** discards the jacket and uses the guidance to seek an appropriately coordinated jacket. The network enabled device **1200** then transmits a request to the processing manager **1110** over the network **1400** to search for a better coordinated jacket on the Internet. Thus, in step **23** of FIG. **2**G, the server **1100** receives the request and the processing manager **1110** routes the request to the coordinator **1140**. In step **23** of FIG. **2**G, coordinator **1140** sends out several web crawlers to seek online jackets for sale that match the profile. The coordinator **1140** then presents the various items to the network enabled device **1200** for viewing by the user **1500** or on a corresponding Internet webpage or website where the inventive system can be accessed and utilized. In accordance with an exemplary embodiment of the claimed invention, the coordinator **1140** can seek apparel from predetermined third-party databases as well. In step **24** of FIG. **2**G, the coordinator **1140** presents to the network enabled device **1200** a link or links to the suggested apparel, in this example, a light gray jacket that can be bought online. In step **25** of FIG. **2**H, the network enabled device **1200** transmits a request to open a link to the recommended jacket and details to the processing manager **1110** which routes the request to the coordinator **1140**. The network enabled device **1200** transmits a request to the coordinator **1140** to store the link and the photograph of the suggested item in the database **1300**. The coordinator **1140** receives the request and stores the data in the database **1300**.

It is noted that FIGS. **3**A-**3**E show exemplary high-level logical steps or processes for Profile **1** performed by the apparel manager **1130** and the coordinator **1140** in accordance with an exemplary embodiment of the claimed invention. These exemplary logical steps can be modified or adopted in whole or in part, or not at all in alternate embodiments that would fall within the scope of the claimed invention.

Coordination Assessment of Profile and Two Apparel Items: Selected Shirt and Tie. Table **200** in FIG. **3**A sets forth the exemplary data from the Profile M**2** for the coordinator **1140** to analyze and table **250** sets forth the exemplary tie specifications for the coordinator **1140** to analyze. Table **300** in FIG. **3**B shows the shirt specification for the coordinator **1140** to analyze. Blocks **410**-**450** in FIG. **3**B show the exemplary logic performed by the coordinator **1140** to accomplish scoring two apparel items for profile M**1** an exemplary. Specifically, in block **410**, the coordinator **1140** scores the color of the tie in light of the exemplary profile M**1** and generates a total average score. In block **420**, the coordinator **1140** scores the color of the shirt parameters in light of the exemplary profile M**1**. In block **430** the coordinator **1140** scores the special parameters of the tie (such as the dimensions) in light of the exemplary profile M**1**. In block **440** of FIG. **3**C, the coordinator **1140** scores the special parameters of the shirt in light of the exemplary profile. In block **450** of FIG. **3**C, the coordinator **1140** scores the pattern of the tie in light of the exemplary profile and the pattern of the shirt and tie in light of the pattern of the shirt and tie. In block **460** of FIG. **3**C, the coordinator **1140** scores the color of the tie and shirt against each other. In block **470** of FIG. **3**C, the coordinator **1140** generates an overall total average score of the two items and exemplary profile M**1** which in this exemplary embodiment of the claimed invention is the sum of all scores divided by the number of scores. Of course, it will be understood by those of skill in the art that the scoring parameters and methods can be altered to fit the desired goals and these alternate processes would still fall within the scope of the claimed invention.

Coordination Assessment of Profile and Three Apparel Items: Selected Shirt, Tie, and Jacket. Table **475** in FIG. **3**D sets forth the exemplary jacket specifications for the coordinator **1140** to analyze, that were entered by the user **1500** via multiple choice input through the network enabled device **1200**. Blocks **476**-**600** in FIGS. **3**D-**3**E show the exemplary logic performed by the coordinator **1140** to accomplish scoring three apparel items in light of the exemplary profile M**1** according to an exemplary embodiment of the claimed invention. Specifically, in block **476** of FIG. **3**D, the coordinator **1140** scores the color of the jacket and in light of the exem-

plary profile M1 and generates a score. In block **480** of FIG. **3**D, the coordinator **1140** scores the pattern parameters of the jacket against the tie. In block **490** of FIG. **3**E, the coordinator **1140** scores the tie and jacket colors against each other. In block **495** of FIG. **3**E, the coordinator **1140** scores the shirt and jacket colors against each other. In block **500** of FIG. **3**E, the coordinator **1140** scores the special parameters (such as the dimensions) of the jacket in light of the exemplary profile M1. In block **510** of FIG. **3**E, the coordinator **1140** generates an overall total average score of the three exemplary apparel items and exemplary profile M1 which in this exemplary embodiment of the claimed invention, is the sum of all scores divided by the number of scores. Of course, it will be understood by those of skill in the art that the scoring parameters and methods can be altered to fit the desired goals and these processes would still fall within the scope of the claimed invention.

The various embodiments of the claimed invention described herein have many advantages, including but not limited to a much more convenient way of coordinating and evaluating attire and accessories. In accordance with an exemplary embodiment of the claimed invention, a user **1500** inputs for permanent storage his or her personal physical profile into the inventive system operating on a network enabled device **1200** with a digital camera **1210**. This personal profile can include but is not limited to colors (hair, skin, eyes, etc.) and proportions (face, shape, neck shape, shoulder to waist ratio, etc.) In accordance with an exemplary embodiment of the claimed invention, when one finds an apparel item of interest which shopping or surface the Internet, she can start the inventive application and take or obtain a photograph of the apparel item of interest (example: a light blue tie with overall grey elephant pattern). The claimed invention readily extracts from the digital photograph information on color(s) and/or pattern(s) and/or shape(s) using existing image recognition software algorithms as available and/or needed and applies a system of rules for the coordination analysis (e.g., mix and matching apparel items).

As described herein, in accordance with an exemplary embodiment of the claimed invention, the system **1000** applies its rules of color and/or proportion coordinating to items of apparel to the stored user profile (example: if user hair dark blond, and if user skin fair, and if user eyes blue, then: no high contrast colors, and then: coordinates blue). Thus, the inventive system **1000** readily offers a recommendation regarding the degree to which the apparel item coordinates (example: thus the recommendation will be positive for the light blue tie coordinating the fair complexion of the skin and light hair color as well as the blue eyes of the profile). In an alternate embodiment of the claimed invention, the system **1000** offers on the spot a weighted recommendation (Example; one to five scale of best to worst) to buy or not to buy or to consider or not to consider the apparel item of interest. In an exemplary embodiment of the claimed invention, the system **1000** can present the user with some explanation on how well the apparel item of interest coordinates with the profiles (Example: thus the recommendation will be positive for the light blue tie coordinating the fair complexion of the skin and light hair color as well as the blue eyes of the profile), or does not do so. The system **1000** can direct the user on where to buy an item that coordinates or similar items to the selected apparel item. Preferably, the user may store the photograph of the item of interest for further use.

Although the claimed invention has been described in considerable detail with reference to certain versions thereof, other versions are possible. For example: the inventive system can also: be applied to multiple profiles stored on the same network enabled device with a camera; be configured to coordinate several items of apparel with each other and a selected profile; be configured to store photographs of various apparel items in order to be ready to use for coordination on another occasion; be configured to select a coordinating apparel item or outfit in any circumstances (Example: select a coordinating outfit from an existing wardrobe at home) or wishing to select an apparel item for any reason or occasion; be configured to provide general guidance before shopping; be configured to coordinate apparel items in the absence of a user profile; be configured to generate and automatic wardrobe; be configured to arrange for gifts based on a profile or inputted individual characteristics. It is possible to disable the profile coordination functionality and simply coordinate apparel items with each other to create for example an ensemble as a gift for a recipient whose exact profile is not known. For example, a person may want to select and offer a clothing item or clothing accessory item as a gift to another party. Further, the system can allow for permanent or temporary storage of multiple personal profiles to assist and guide for gift-giving or other occasions such as several people (e.g. mother and daughter) using one mobile device. In accordance with the embodiments of the claimed invention, the system **1000** can consider dimensions unique to children or women; the system could take into account characteristics such as but not limited to make-up, changing hair color, favorite hues, and the like. Any and all such versions and others as readily understood by those of skill in the art are contemplated by the claimed invention.

The invention claimed is:

1. A computer implemented method for coordinating and evaluating apparel items, comprising the steps of:

receiving a digital image of an apparel item by a processor based client device for coordination with a stored apparel item selected from user's virtual wardrobe by a user, the user's virtual wardrobe being stored in a storage device;

extracting colors, pattern, texture, length and width features of said apparel item received for coordination from the digital image of said apparel item by the processor based client device;

categorizing user's contrast type by the processor based client device based on a profile contrast rule and a combination of user's hair color, facial hair color, skin color, skin tone, facial complexion, and eye color;

categorizing user's body type by the processor based client device based on the profile contrast rule and user's neck shape, neck length, shoulder slope and face shape;

categorizing user's relative body proportions by the processor based client device based at least one of the following: shoulder to waist ratio or shoulder to hip ratio;

storing extracted colors and extracted pattern features of said apparel item received for coordination, user's contrast type, user's body type and user's relative body proportion in the user's virtual wardrobe by the processor based client device;

calculating a coordination score of said apparel item based on the color and pattern features extracted from the digital image of said apparel item by the processor based client device to determine whether said apparel item compliments physical characteristics and relative bodily proportions/dimensions of said user and coordinates with the stored apparel item, the processor based client device:

calculates a first color score by comparing the extracted colors of said apparel item received for coordination to base and accent colors of user's contrast type to

determine an amount of the base and accent colors appearing in said apparel item received for coordination;

calculates a second color score by comparing the extracted colors of two apparel items received and selected for coordination to determine matching colors;

determines and stores a pattern type and size of the pattern from the extracted pattern features of said apparel item received for coordination in the user's virtual wardrobe;

calculates a first pattern score by comparing the pattern type and the size of the pattern of said apparel item received for coordination to user's relative body proportions;

calculates a second pattern score by comparing the pattern type and the size of the pattern of the two apparel items for coordination;

calculates the coordination score by summing the first color score, the second color score, the first pattern score and the second pattern score;

calculates a skill score by summing the second color score and the second pattern score, the skill score representing a difficulty level of coordinating two apparel items received and selected for coordination; and

generating a sliding coordination score and a summary based on the coordination score;

providing a negative recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination does not compliment the physical characteristics and the relative bodily dimensions of said user based on the sliding coordination score;

providing the skill score and a positive recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily dimensions of said user and coordinates with the stored apparel item selected for coordination based on the sliding coordination score; and

providing the skill score and a recommendation of another apparel item from the user's virtual wardrobe if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily proportions/dimensions of said user but does not coordinate with the stored apparel item selected for coordination based on the sliding coordination score.

2. The method of claim **1**, further comprising the steps of transmitting the physical characteristics and the relative bodily proportions/dimensions to a processor based server associated with a retailer's website over a communications network; and receiving information about one or more apparel items sold on the retailer's website that compliments the physical characteristics and the relative bodily proportions/dimensions of said user from the processor based server by the processor based client device associated with said user over said communications network.

3. The method of claim **1**, further comprising the steps of receiving answers to a plurality of questions to generate a profile of said user, the profile comprising at least one of the following physical characteristics or relative bodily proportions/dimensions of said user: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color; and storing the profile and received answers to said plurality of questions in the storage device of the processor based client device.

4. The method of claim **1**, wherein the user's virtual wardrobe comprises information relating to a plurality of apparel items of said user.

5. The method of claim **1**, further comprising the steps of generating the user's virtual wardrobe by the processor based client device associated with said user based on information received relating to a plurality of apparel items of said user; and storing the user's virtual wardrobe in the storage device of said client device.

6. The method of claim **5**, wherein the step of generating the user's virtual wardrobe comprises the step of receiving answers to a plurality of questions by the processor based client device associated with said user; and storing received answers to said plurality of questions in the storage device of processor based client device associated with said user.

7. The method of claim **1**, further comprising the step of storing said apparel item in the user's virtual wardrobe if said apparel item received for coordination is acquired by said user.

8. The method of claim **1**, further comprising the step of searching Internet or third-party database for an apparel item that compliments the physical characteristics and the relative bodily proportions/dimensions of said user and coordinates with said one or more apparel items in the user's virtual wardrobe by the processor based client device over said communications network.

9. The method of claim **1**, further comprising the steps of:

calculating another person's coordination score of an apparel item received for coordination for the other person by the processor based client device to determine whether said apparel item for the other person compliments physical characteristics and relative bodily proportions/dimensions of the other person and coordinates with a stored apparel item selected from a virtual wardrobe of the other person by said user;

generating other person's sliding coordination score and summary based on the other person's coordination score;

providing a negative recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person does not compliment the physical characteristics and the relative bodily dimensions of the other person based on the other person's sliding coordination score;

providing a positive recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily dimensions of the other person and coordinates with the stored apparel item of the other person selected for coordination by said user based on the other person's sliding coordination score; and

providing a recommendation of another apparel item from the virtual wardrobe of the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily proportions/dimensions of the other person but does not coordinate with the stored apparel item selected from the virtual wardrobe of the other person for coordination based on the other person's sliding coordination score.

10. The method of claim 1, further comprising the step of selecting said apparel item from a plurality of apparel items sold by a retailer.

11. The method of claim 1, further comprising the step of obtaining the digital image from a digital camera associated with the processor based client device.

12. A computer implemented method for coordinating and evaluating apparel items, comprising the steps of:

receiving a digital image of an apparel item for coordination with a stored apparel item selected from user's virtual wardrobe by a user from a processor based client device associated with the user by a processor based server over a communications network, the user's virtual wardrobe being stored in a database;

extracting colors, pattern, texture, length and width features of said apparel item received for coordination from the digital image of said apparel item by the server;

categorizing user's contrast type by the server based on a profile contrast rule and a combination of user's hair color, facial hair color, skin color, skin tone, facial complexion, and eye color;

categorizing user's body type by the server based on the profile contrast rule and user's neck shape, neck length, shoulder slope and face shape;

categorizing user's relative body proportions by the server based at least one of the following: shoulder to waist ratio or shoulder to hip ratio;

storing extracted colors and extracted pattern features of said apparel item received for coordination, user's contrast type, user's body type and user's relative body proportion in the user's virtual wardrobe by the server;

calculating a coordination score of said apparel item based on the color and pattern features extracted from the digital image of said apparel item by the server to determine whether said apparel item compliments physical characteristics and relative bodily proportions/dimensions of said user and coordinates with the stored apparel item, the server;

calculates a first color score by comparing the extracted colors of said apparel item received for coordination to base and accent colors of user's contrast type to determine an amount of the base and accent colors appearing in said apparel item received for coordination;

calculates a second color score by comparing the extracted colors of two apparel items received and selected for coordination to determine matching colors;

determines and stores a pattern type and size of the pattern from the extracted pattern features of said apparel item received for coordination in the user's virtual wardrobe;

calculates a first pattern score by comparing the pattern type and the size of the pattern of said apparel item received for coordination to user's relative body proportions;

calculates a second pattern score by comparing the pattern type and the size of the pattern of the two apparel items for coordination;

calculates the coordination score by summing the first color score, the second color score, the first pattern score and the second pattern score;

calculates a skill score by summing the second color score and the second pattern score, the skill score representing a difficulty level of coordinating two apparel items received and selected for coordination; and

generating a sliding coordination score and a summary based on the coordination score;

providing a negative recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination does not compliment the physical characteristics and the relative bodily dimensions of said user based on the sliding coordination score;

providing the skill score and a positive recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily dimensions of said user and coordinates with the stored apparel item selected for coordination based on the sliding coordination score; and

providing the skill score and a recommendation of another apparel item from the user's virtual wardrobe if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily proportions/dimensions of said user but does not coordinate with the stored apparel item selected for coordination based on the sliding coordination score.

13. The method of claim 12, further comprising the step of receiving a digital image of said apparel item by the processor based server from a digital camera of the processor based client device over said communications network; and

extracting features of said apparel item from the digital image by said processor based server.

14. The method of claim 12, further comprising the steps of transmitting a plurality of questions to the processor based client device associated with said user to generate a profile of said user by the processor based server over said communications network, the profile comprising at least one of the following physical characteristics or relative bodily proportions/dimensions of said user: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color; and receiving answers entered on the processor based client device to said plurality of questions by the processor based server over said communications network; and storing the profile and received answers to said plurality of questions in a database.

15. The method of claim 12, further comprising the steps of generating the user's virtual wardrobe by the processor based server based on information received relating to a plurality of apparel items of said user from the processor based client device associated with said user over said communications network; and storing the user's virtual wardrobe in a database.

16. The method of claim 15, wherein the step of generating the user's virtual wardrobe comprises the step of transmitting a plurality of questions to the processor based client device by the processor based server over said communications network; and receiving answers entered on the processor based client device to said plurality of questions by the processor based server over said communications network; and storing received answers to said plurality of questions in the database.

17. The method of claim 12, further comprising the step of searching Internet or third-party database for an apparel item that compliments the physical characteristics and the relative bodily proportions/dimensions of said user and coordinates with said one or more apparel items in the user's virtual wardrobe by the processor based server over said communications network; and transmitting information relating to said apparel item from Internet or third-party database to the processor based client device associated with said user by the processor based server over said communications network.

18. The method of claim 12, wherein the processor based server is associated with a retailer's website; and transmitting information about one or more apparel items sold on the retailer's website that compliments the physical characteristics and the relative bodily proportions/dimensions of said user to the processor based client device by the server over said communications network.

19. The method of claim 12, further comprising the steps of:

calculating another person's coordination score of an apparel item received for coordination for the other person by the server to determine whether said apparel item for the other person compliments physical characteristics and relative bodily proportions/dimensions of the other person and coordinates with a stored apparel item selected from a virtual wardrobe of the other person by said user;

generating other person's sliding coordination score and summary based on the other person's coordination score;

providing a negative recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person does not compliment the physical characteristics and the relative bodily dimensions of the other person based on the other person's sliding coordination score;

providing a positive recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily dimensions of the other person and coordinates with the stored apparel item of the other person selected for coordination by said user based on the other person's sliding coordination score; and

providing a recommendation of another apparel item from the virtual wardrobe of the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily proportions/dimensions of the other person but does not coordinate with the stored apparel item selected from the virtual wardrobe of the other person for coordination based on the other person's sliding coordination score.

20. A non-transitory computer readable medium comprising computer executable code for coordinating and evaluating apparel items, said code comprising instructions for:

receiving a digital image of an apparel item by a processor based client device for coordination with a stored apparel item selected from user's virtual wardrobe by a user, the user's virtual wardrobe being stored in a storage device;

extracting colors, pattern, texture, length and width features of said apparel item received for coordination from the digital image of said apparel item by the processor based client device;

categorizing user's contrast type by the processor based client device based on a profile contrast rule and a combination of user's hair color, facial hair color, skin color, skin tone, facial complexion, and eye color;

categorizing user's body type by the processor based client device based on the profile contrast rule and user's neck shape, neck length, shoulder slope and face shape;

categorizing user's relative body proportions by the processor based client device based at least one of the following: shoulder to waist ratio or shoulder to hip ratio;

storing extracted colors and extracted pattern features of said apparel item received for coordination, user's contrast type, user's body type and user's relative body proportion in the user's virtual wardrobe by the processor based client device;

calculating a coordination score of said apparel item based on the color and pattern features extracted from the digital image of said apparel item by the processor based client device to determine whether said apparel item compliments physical characteristics and relative bodily proportions/dimensions of said user and coordinates with the stored apparel item, the processor based client device:

calculates a first color score by comparing the extracted colors of said apparel item received for coordination to base and accent colors of user's contrast type to determine an amount of the base and accent colors appearing in said apparel item received for coordination;

calculates a second color score by comparing the extracted colors of two apparel items received and selected for coordination to determine matching colors;

determines and stores a pattern type and size of the pattern from the extracted pattern features of said apparel item received for coordination in the user's virtual wardrobe;

calculates a first pattern score by comparing the pattern type and the size of the pattern of said apparel item received for coordination to user's relative body proportions;

calculates a second pattern score by comparing the pattern type and the size of the pattern of the two apparel items for coordination;

calculates the coordination score by summing the first color score, the second color score, the first pattern score and the second pattern score;

calculates a skill score by summing the second color score and the second pattern score, the skill score representing a difficulty level of coordinating two apparel items received and selected for coordination; and

generating a sliding coordination score and a summary based on the coordination score;

providing a negative recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination does not compliment the physical characteristics and the relative bodily dimensions of said user based on the sliding coordination score;

providing the skill score and a positive recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily dimensions of said user and coordinates with the stored apparel item selected for coordination based on the sliding coordination score; and

providing the skill score and a recommendation of another apparel item from the user's virtual wardrobe if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily proportions/dimensions of said user but does not coordinate with the stored apparel item selected for coordination based on the sliding coordination score.

21. The computer readable medium of claim 20, further comprising instructions for transmitting the physical characteristics and the relative bodily proportions/dimensions to a

processor based server associated with a retailer's website over a communications network; and receiving information about one or more apparel items sold on the retailer's website that compliments the physical characteristics and the relative bodily proportions/dimensions of said user from the processor based server by the processor based client device associated with said user over said communications network.

22. The computer readable medium of claim **20**, further comprising the instructions for receiving answers to a plurality of questions to generate a profile of said user to coordinate and evaluate apparel items in the user's virtual wardrobe, the profile comprising at least one of the following physical characteristics or relative bodily proportions/dimensions of said user: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color; and storing the profile and received answers to said plurality of questions in the storage device of the processor based client device.

23. The computer readable medium of claim **20**, wherein the user's virtual wardrobe comprises information relating to a plurality of apparel items of said user.

24. The computer readable medium of claim **20**, further comprising instructions for transmitting over a communications network by the processor based client device the digital image of said apparel item to a processor based server for extracting features of said apparel item from the digital image.

25. The computer readable medium of claim **20**, further comprising the instructions for receiving answers to a plurality of questions to generate a profile of another person to coordinate and evaluate apparel items in a virtual wardrobe associated with said other person, the profile comprising at least one of the following physical characteristics or relative bodily proportions/dimensions of said other person: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color; and storing said profile of said other person and received answers to the questions in the storage device of the processor based client device associated with the user.

26. The computer readable medium of claim **20**, further comprising instructions for generating the user's virtual wardrobe by the processor based client device associated with said user based on information received relating to a plurality of apparel items of said user; and storing the user's virtual wardrobe in the storage device of said client device.

27. The computer readable medium of claim **26**, further comprising instructions for receiving answers to a plurality of questions to generate the user's virtual wardrobe by the processor based client device; and storing received answers to said plurality of questions in the storage device of the processor client device.

28. The computer readable medium of claim **20**, further comprising instructions for transmitting over a communications network by the processor based client device information relating to a plurality of apparel items of said user to a processor based server to generate and store the user's virtual wardrobe in a database, said virtual wardrobe comprising virtual wardrobe comprising information relating to a plurality of apparel/accessory items.

29. The computer readable medium of claim **20**, further comprising instructions for storing said apparel item in the user's virtual wardrobe if said apparel item received for coordination is acquired by said user.

30. The computer readable medium of claim **20**, further comprising instructions for searching Internet or third-party database for an apparel item that coordinates with said one or more apparel items in the user's virtual wardrobe by the processor based client device over a communications network.

31. The computer readable medium of claim **20**, further comprising instructions for searching Internet or third-party database for an apparel item that compliments the physical characteristics and bodily proportions of said user by the processor based client device over a communications network.

32. The method of claim **20**, further comprising instructions for:

calculating another person's coordination score of an apparel item received for coordination for the other person by the processor based client device to determine whether said apparel item for the other person compliments physical characteristics and relative bodily proportions/dimensions of the other person and coordinates with a stored apparel item selected from a virtual wardrobe of the other person by said user;

generating other person's sliding coordination score and summary based on the other person's coordination score;

providing a negative recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person does not compliment the physical characteristics and the relative bodily dimensions of the other person based on the other person's sliding coordination score;

providing a positive recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily dimensions of the other person and coordinates with the stored apparel item of the other person selected for coordination by said user based on the other person's sliding coordination score; and

providing a recommendation of another apparel item from the virtual wardrobe of the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily proportions/dimensions of the other person but does not coordinate with the stored apparel item selected from the virtual wardrobe of the other person for coordination based on the other person's sliding coordination score.

33. A system for coordinating and evaluating apparel items, comprising:

a processor based client device associated with a user for receiving a digital image of an apparel item for coordination;

a processor based server for:

receiving from said client device over a communications network the digital image of said apparel item for coordination with a stored apparel item selected from a user's virtual wardrobe by a user, the user's virtual wardrobe being stored in a database;

extracting colors, pattern, texture, length and width features of said apparel item received for coordination from the digital image of said apparel item received said client device;

categorizing user's contrast type by the processor based client device based on a profile contrast rule and a combination of user's hair color, facial hair color, skin color, skin tone, facial complexion, and eye color;

categorizing user's body type by the processor based client device based on the profile contrast rule and user's neck shape, neck length, shoulder slope and face shape;

categorizing user's relative body proportions by the processor based client device based at least one of the following: shoulder to waist ratio or shoulder to hip ratio;

storing extracted colors and extracted pattern features of said apparel item received for coordination, user's contrast type, user's body type and user's relative body proportion in the user's virtual wardrobe;

calculating a coordination score of said apparel item based on the color and pattern features extracted from the digital image of said apparel item to determine whether said apparel item compliments physical characteristics and relative bodily proportions/dimensions of said user and coordinates with the stored apparel item, the processor based server:

calculates a first color score by comparing the extracted colors of said apparel item received for coordination to base and accent colors of user's contrast type to determine an amount of the base and accent colors appearing in said apparel item received for coordination;

calculates a second color score by comparing the extracted colors of two apparel items received and selected for coordination to determine matching colors;

determines and stores a pattern type and size of the pattern from the extracted pattern features of said apparel item received for coordination in the user's virtual wardrobe;

calculates a first pattern score by comparing the pattern type and the size of the pattern of said apparel item received for coordination to user's relative body proportions;

calculates a second pattern score by comparing the pattern type and the size of the pattern of the two apparel items for coordination;

calculates the coordination score by summing the first color score, the second color score, the first pattern score and the second pattern score;

calculates a skill score by summing the second color score and the second pattern score, the skill score representing a difficulty level of coordinating two apparel items received and selected for coordination; and

generating a sliding coordination score and a summary based on the coordination score;

providing a negative recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination does not compliment the physical characteristics and the relative bodily dimensions of said user based on the sliding coordination score;

providing the skill score and a positive recommendation of said apparel item received for coordination if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily dimensions of said user and coordinates with the stored apparel item selected for coordination based on the sliding coordination score; and

providing the skill score and a recommendation of another apparel item from the user's virtual wardrobe if it is determined that said apparel item received for coordination compliments the physical characteristics and the relative bodily proportions/dimensions of said user but does not coordinate with the stored apparel item selected for coordination based on the sliding coordination score.

34. The system of claim **33**, wherein said server transmits the recommendation of one or more apparel items from a retailer's website that coordinates with one or more apparel items in the user's virtual wardrobe to said client device over said communications network, the user's virtual wardrobe comprising information relating to a plurality of apparel items of said user.

35. The system of claim **33**, wherein said server is associated with a retailer's website and transmits the recommendation of one or more apparel items from said retailer's website that compliment physical characteristics and relative bodily proportions/dimensions of said user to said client device over said communications network.

36. The system of claim of **33**, wherein said server searches a retailer's website for one or more apparel items that compliment physical characteristics and relative bodily proportions/dimensions of said user and transmits information relating to said one or more apparel items to said client device over said communications network.

37. The system of claim **33**, wherein said server transmits a plurality of questions to generate a profile of said user to coordinate and evaluate apparel items in the user's virtual wardrobe, the profile comprising at least one of the following physical characteristics or relative bodily proportions/dimensions of said user: facial complexion, body proportions, skin color, skin tone, face shape, neck shape, neck length, height, weight, shoulder to waist ratio, shoulder to hip ratio, shoulder slope, hair color and eye color to said client device over said communications network and receives answers entered on said client device by said user to said plurality of questions from said client device over said communications network; and further comprising the database for storing said profile and received answers to said plurality of questions.

38. The system of claim **33**, wherein said server receives information about said apparel item entered on said client device by said user from said client device over a communications network; and wherein the database stores said entered information.

39. The system of claim **33**, wherein said server receives the digital image of said apparel item from a digital camera of said client device over said communications network.

40. The system of claim **33**, wherein said server generates the user's virtual wardrobe based on information received relating to a plurality of apparel items of said user from said client device over said communications network.

41. The system of claim **40**, wherein said client device receives a plurality of questions from said server over said communications network and transmits answers entered on said client device by said user to said plurality of questions to said server for generating the user's virtual wardrobe based on the answers, and storing answers and the user's virtual wardrobe in the database.

42. The system of claim **40**, wherein said server searches Internet or third-party database for an apparel item that coordinates with said one or more apparel items in the user's virtual wardrobe and transmits information relating to said apparel item from Internet or third-party database to said client device over said communications network.

43. The system of claim **33**, wherein said server stores said apparel item in the user's virtual wardrobe if said apparel item received for coordination is acquired by said user.

44. The system of claim **33**, wherein said server searches Internet or third-party database for an apparel item that com-

pliments the physical characteristics and the relative bodily proportions/dimensions of said user and transmits information relating to said apparel item from Internet or third-party database to said client device over said communications network.

45. The system of claim **33**, wherein said client device is a network enabled device comprising a digital camera.

46. The system of claim **33**, wherein said client device is one of the following: a cell phone, a smartphone, a laptop, a netbook, a tablet PC, a mobile wireless device, a personal digital assistant (PDA).

47. The system of claim **33**, wherein said server:

calculates another person's coordination score of an apparel item received for coordination for the other person to determine whether said apparel item for the other person compliments physical characteristics and relative bodily proportions/dimensions of the other person and coordinates with a stored apparel item selected from a virtual wardrobe of the other person by said user;

generates other person's sliding coordination score and summary based on the other person's coordination score;

provides a negative recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person does not compliment the physical characteristics and the relative bodily dimensions of the other person based on the other person's sliding coordination score;

provides a positive recommendation of said apparel item received for coordination for the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily dimensions of the other person and coordinates with the stored apparel item of the other person selected for coordination by said user based on the other person's sliding coordination score; and

provides a recommendation of another apparel item from the virtual wardrobe of the other person if it is determined that said apparel item received for coordination for the other person compliments the physical characteristics and the relative bodily proportions/dimensions of the other person but does not coordinate with the stored apparel item selected from the virtual wardrobe of the other person for coordination based on the other person's sliding coordination score.

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