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David

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(54) **SITE IMAGE CAPTURE AND MARKETING SYSTEM AND ASSOCIATED METHODS**

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G08B 13/196	(2006.01)
G06Q 30/06	(2012.01)
G06K 9/00	(2006.01)

(52) **U.S. Cl.**

CPC ***H04N 1/00132*** (2013.01); ***G06K 9/00288*** (2013.01); ***G06Q 30/0621*** (2013.01); ***G08B 13/19684*** (2013.01); ***G08B 13/19689*** (2013.01)

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CPC H04N 1/00244; H04N 2201/0084; H04N 5/23206; H04N 1/00132; H04N 1/0019; H04N 7/18; H04N 7/181; G06Q 30/0621; G08B 13/19684; G08B 13/19689; G06K 9/00288

USPC 348/143, 156, 157, 159, 207.99, 348/211.99–211.3, 211.11, 211.14, 218.1, 348/231.5; 705/1, 5, 26.1, 26.5, 26.8, 705/26.62; 396/56, 427, 429; 382/115, 224; 358/402

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,448,320 A	9/1995	Sakai et al.
5,587,740 A	12/1996	Brennan et al.
5,606,365 A	2/1997	Maurinus et al.

(Continued)

FOREIGN PATENT DOCUMENTS

JP	2001-148822	5/2001
JP	2002-297753	11/2002
JP	2004-297191	10/2004

OTHER PUBLICATIONS

Gilmore et al., Customer Experience Places: The New Offering Frontier; Strategy & Leadership. Chicago:2002. vol. 30, Iss. 4; p. 4: Retrieved from ProQuestDirect on the Internet on Nov. 29, 2012, 12 pages.

(Continued)

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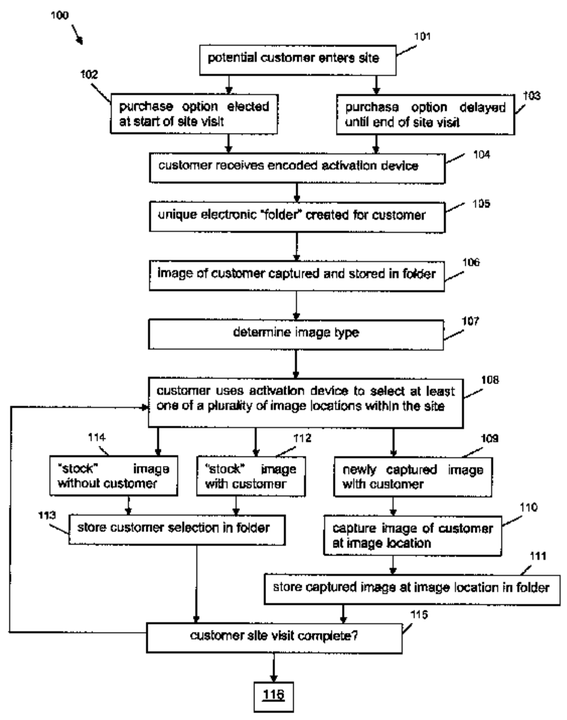
(57) **ABSTRACT**

The present invention in one aspect is directed to systems and methods for capturing a digital image, and preferably a collection of digital images, of a customer in a defined location, such as a museum, a garden, a zoo, a religious institution, a theme park, or any such site known in the art, or in a defined time period, such as a vacation. The systems and methods provide a customer with a customized pictorial souvenir, physical and/or electronic, of a visit or vacation. The souvenir can include other elements, such as "stock" images, alone or having had an image of the customer digitally inserted thereinto, and informational material. Embodiments are also provided that employ devices such as "smart," interactive devices and read only or read/write devices.

6 Claims, 11 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

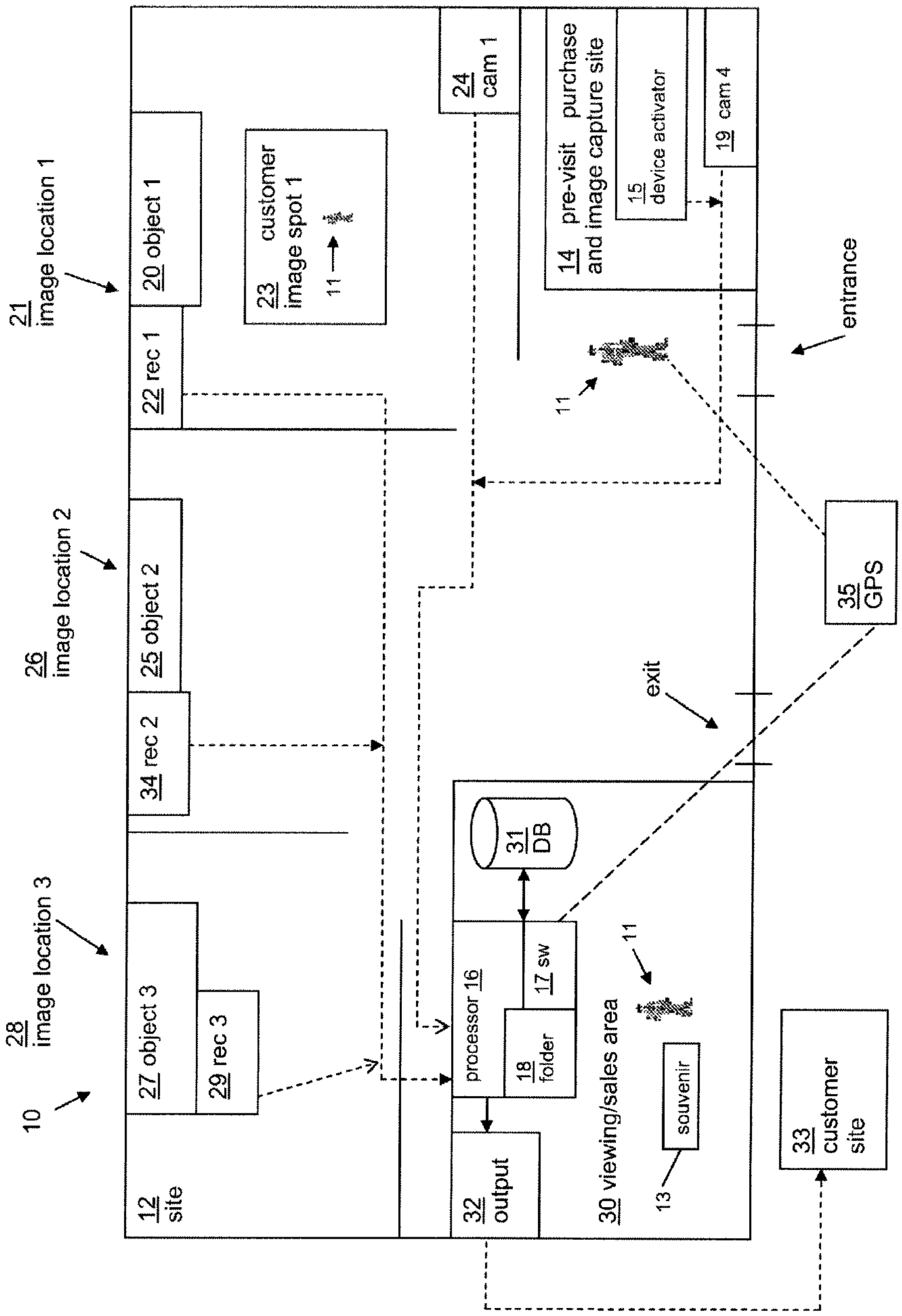
5,768,633	A	6/1998	Allen et al.	
6,222,646	B1	4/2001	Maurinus et al.	
6,385,772	B1	5/2002	Courtney	
6,417,913	B2	7/2002	Tanaka	
6,532,345	B1	3/2003	Gluck	
6,542,824	B1	4/2003	Berstis	
6,545,708	B1	4/2003	Tamayama et al.	
6,591,068	B1	7/2003	Dietz	
6,628,899	B1 *	9/2003	Kito	396/56
6,698,943	B2	3/2004	Gluck	
6,759,957	B2	7/2004	Murakami et al.	
6,774,936	B1	8/2004	Park	
6,856,346	B1	2/2005	Kobayashi et al.	
7,077,581	B2	7/2006	Gluck	
7,158,945	B1	1/2007	Wolcott et al.	
7,283,687	B2	10/2007	Bodin et al.	
7,301,558	B2	11/2007	Gluck	
7,343,320	B1	3/2008	Treyz et al.	
7,466,909	B2	12/2008	Meininger	
7,607,843	B2	10/2009	Gluck	
2002/0085762	A1 *	7/2002	Shniberg et al.	382/224
2002/0128934	A1	9/2002	Shaer	
2003/0023452	A1 *	1/2003	Novais et al.	705/1
2003/0067543	A1	4/2003	Okada et al.	
2003/0086123	A1	5/2003	Torrens-Burton	
2004/0008872	A1 *	1/2004	Goldberg	382/115
2004/0152486	A1	8/2004	Sano	
2004/0189816	A1	9/2004	Nakazawa et al.	
2004/0201683	A1	10/2004	Murashita et al.	
2004/0201709	A1	10/2004	McIntyre et al.	
2005/0091119	A1	4/2005	Tuijn et al.	
2005/0117018	A1	6/2005	Wolf	
2006/0158520	A1 *	7/2006	Funakura	348/207.99
2007/0003113	A1	1/2007	Goldberg	
2008/0234049	A1	9/2008	LeBlanc et al.	
2008/0251575	A1	10/2008	Bowling et al.	
2009/0052736	A1	2/2009	Kacker	

OTHER PUBLICATIONS

Picture Your Perfect Camera, Derrick Story. Macworld. San Francisco: Jan. 2005. vol. 22, Iss.1; p. 60, download from ProQuestDirect on the Internet on Apr. 23, 2012.

* cited by examiner

FIG. 1


21 image location 1
20 object 1
22 rec 1
23 customer image spot 1
11
24 cam 1
14 pre-visit purchase and image capture site
15 device activator
19 cam 4
entrance
11
26 image location 2
25 object 2
34 rec 2
35 GPS
exit
31 DB
28 image location 3
27 object 3
29 rec 3
processor 16
17 sw
18 folder
11
souvenir
13
10
12 site
32 output
30 viewing/sales area
33 customer site

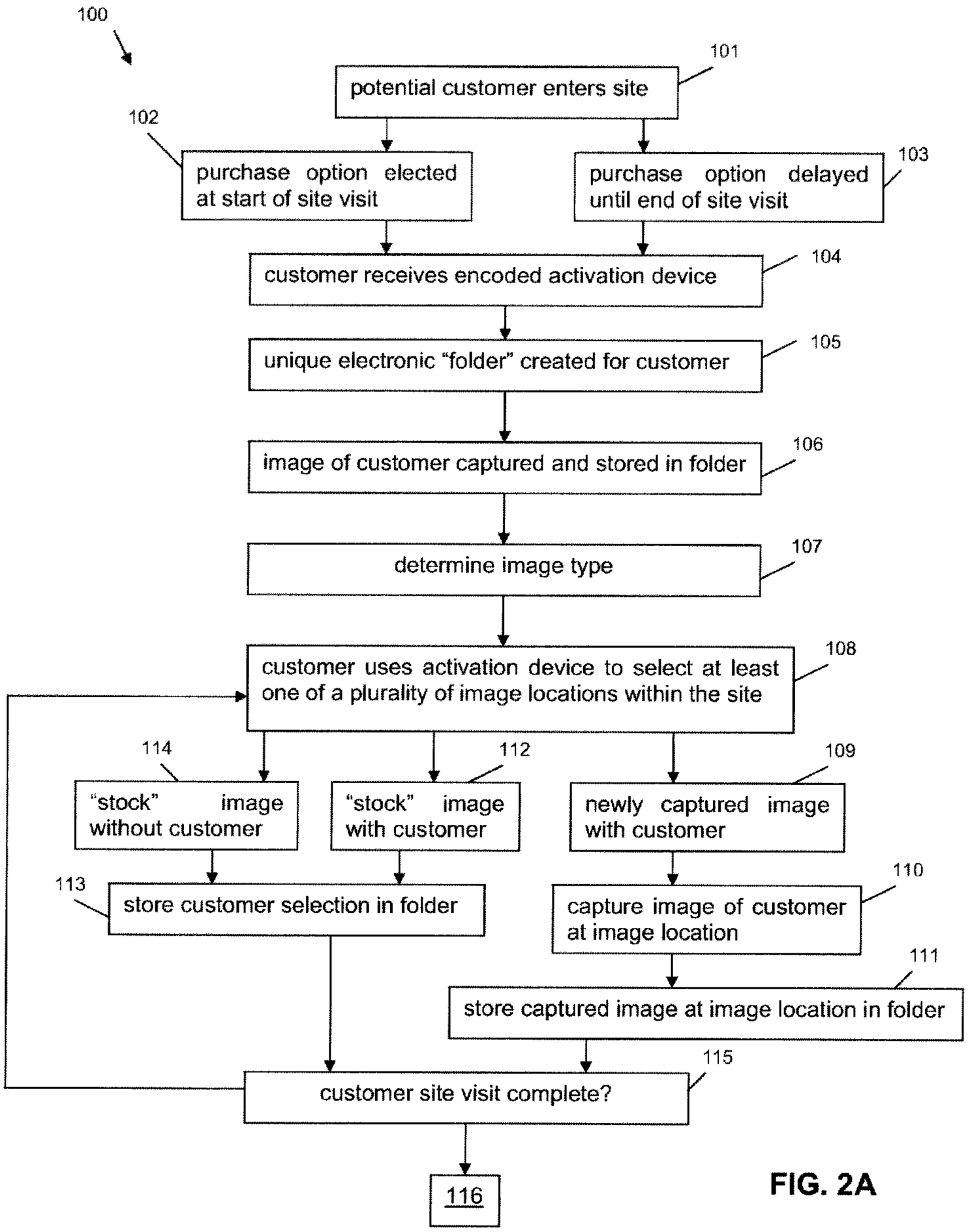

100
potential customer enters site
101
purchase option elected at start of site visit
102
purchase option delayed until end of site visit
103
customer receives encoded activation device
104
unique electronic "folder" created for customer
105
image of customer captured and stored in folder
106
determine image type
107
customer uses activation device to select at least one of a plurality of image locations within the site
108
"stock" image without customer
114
"stock" image with customer
112
newly captured image with customer
109
store customer selection in folder
113
capture image of customer at image location
110
store captured image at image location in folder
111
customer site visit complete?
115
116

FIG. 2A

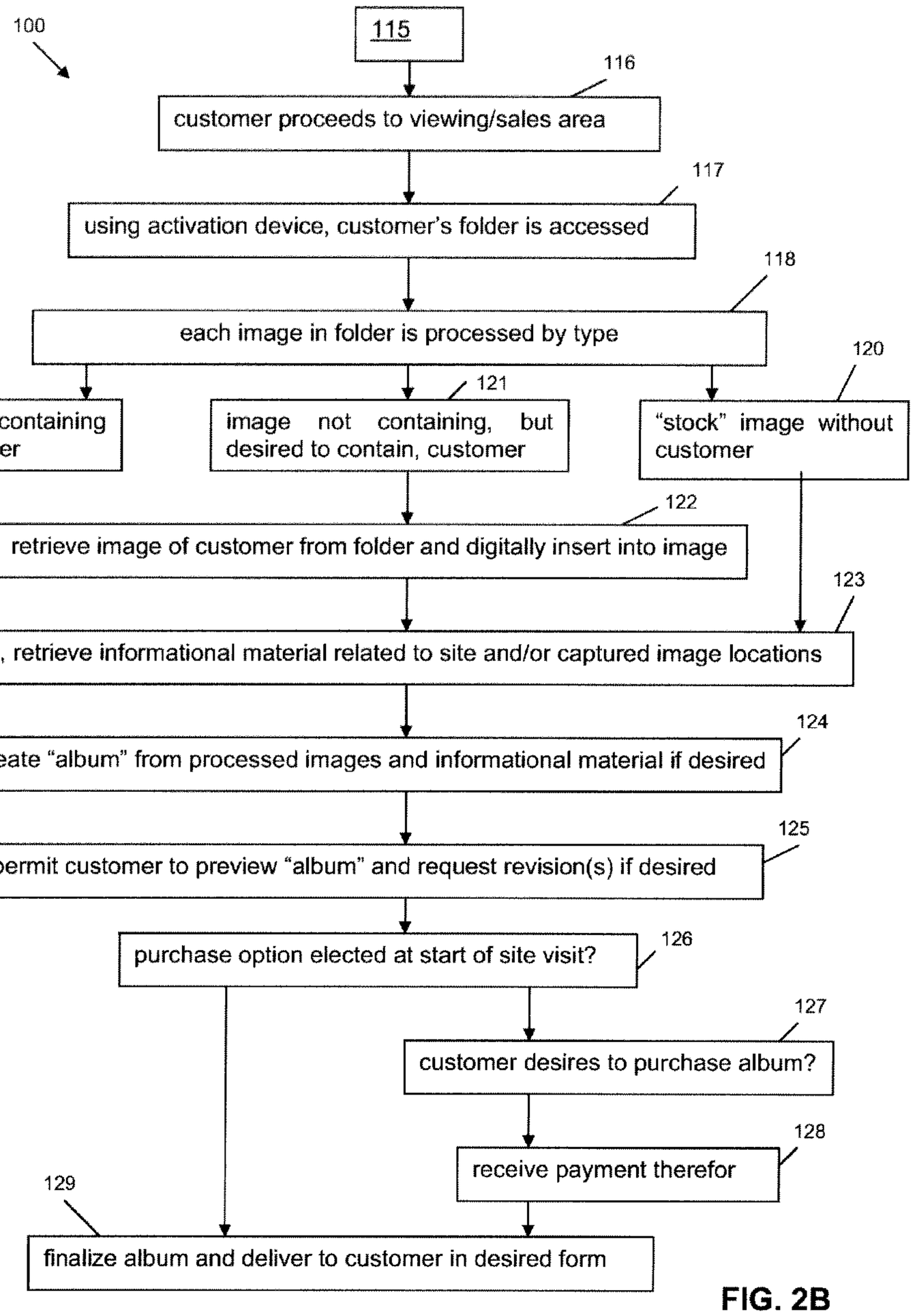

100
115
116
customer proceeds to viewing/sales area
117
using activation device, customer's folder is accessed
118
each image in folder is processed by type
119
image containing customer
121
image not containing, but desired to contain, customer
120
"stock" image without customer
122
retrieve image of customer from folder and digitally insert into image
123
if desired, retrieve informational material related to site and/or captured image locations
124
create "album" from processed images and informational material if desired
125
permit customer to preview "album" and request revision(s) if desired
126
purchase option elected at start of site visit?
127
customer desires to purchase album?
128
receive payment therefor
129
finalize album and deliver to customer in desired form

FIG. 2B

FIG. 3

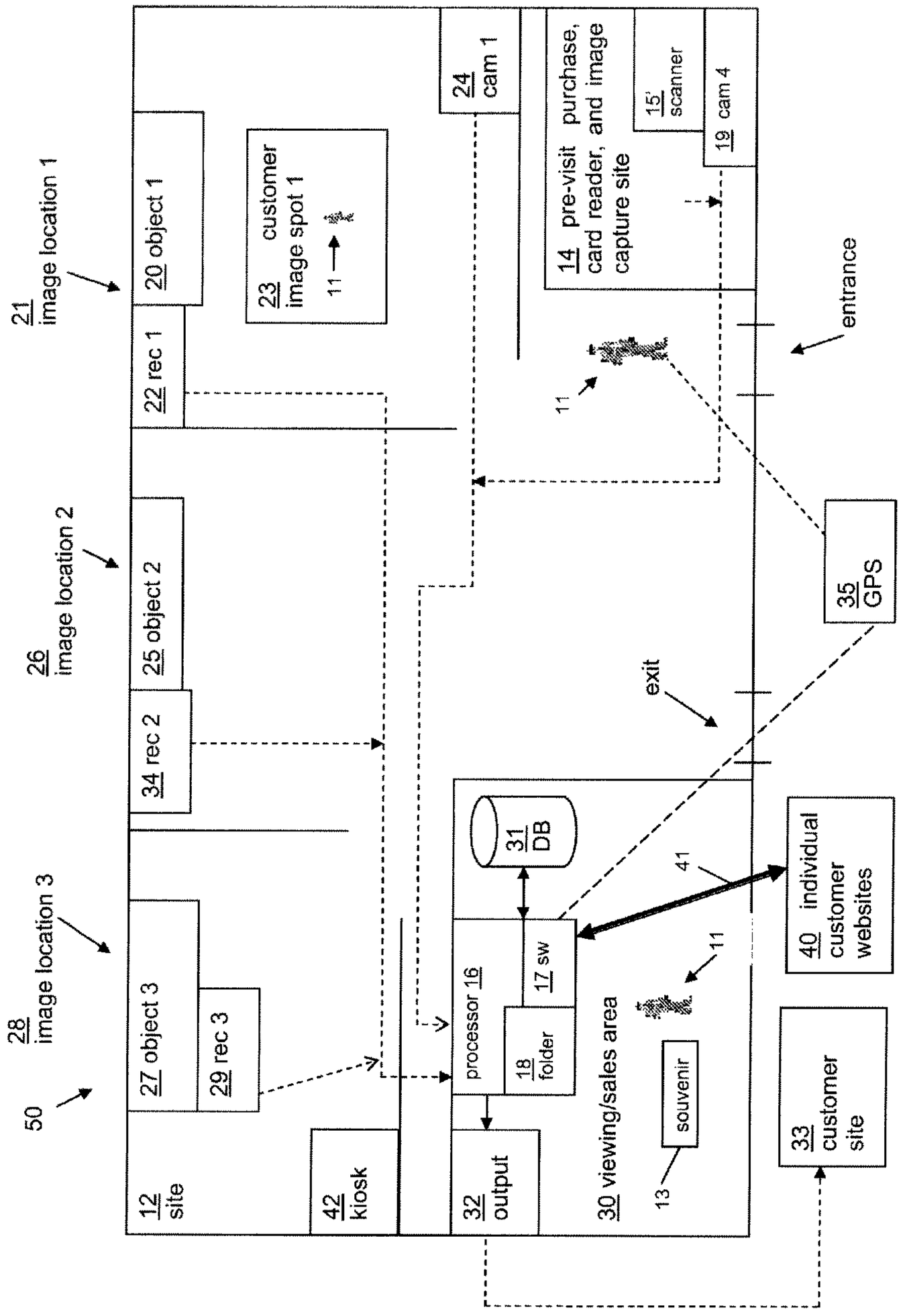
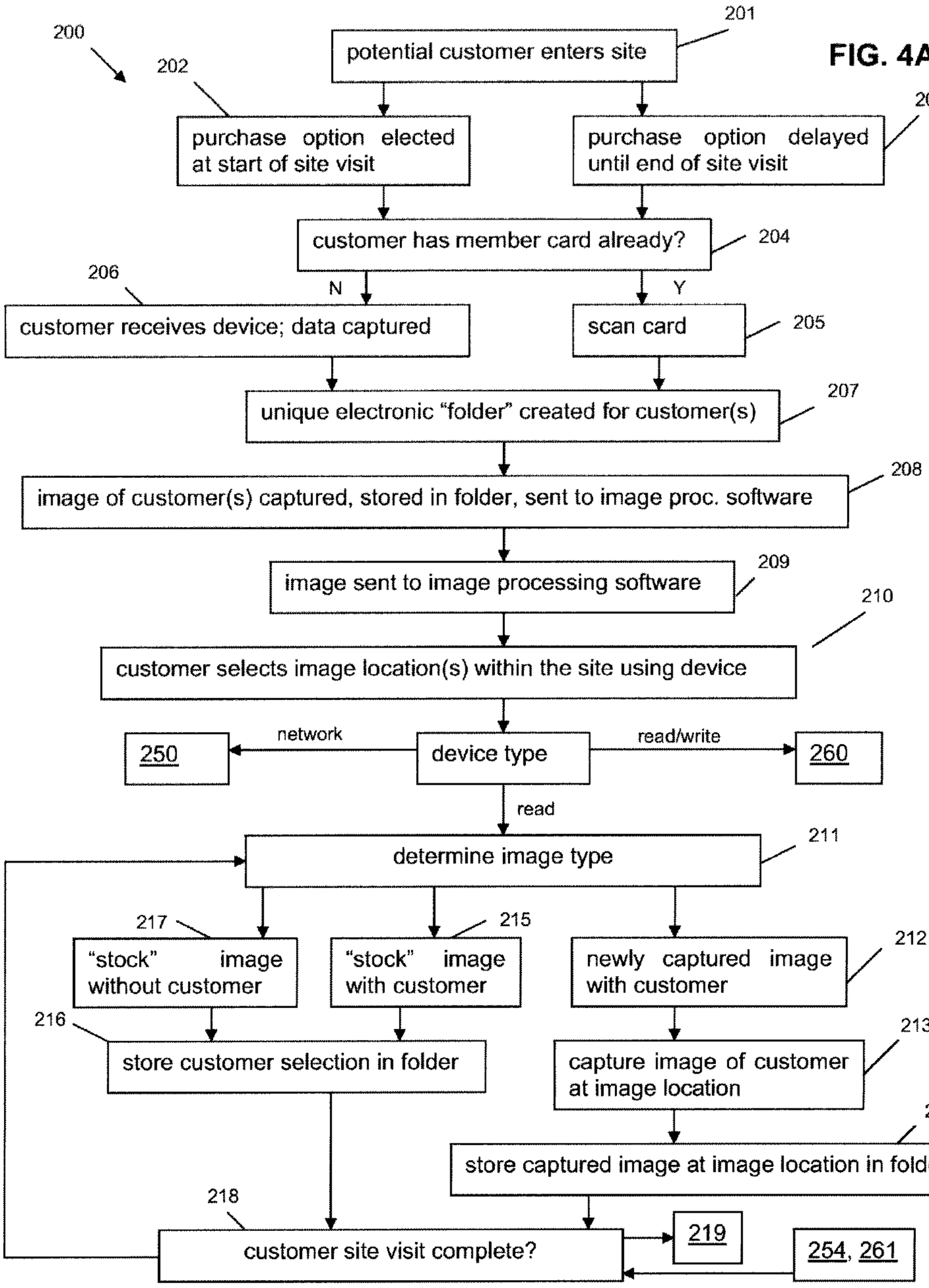

21 image location 1
20 object 1
22 rec 1
23 customer image spot 1
11
24 cam 1
14 pre-visit purchase, card reader, and image capture site
15' scanner
19 cam 4
entrance
11
26 image location 2
25 object 2
34 rec 2
35 GPS
exit
28 image location 3
27 object 3
29 rec 3
31 DB
41
40 individual customer websites
processor 16
17 sw
18 folder
11
12 site
42 kiosk
32 output
30 viewing/sales area
souvenir
13
33 customer site
50

FIG. 4A


200
201
potential customer enters site
202
purchase option elected at start of site visit
203
purchase option delayed until end of site visit
customer has member card already?
204
N
Y
206
customer receives device; data captured
scan card
205
207
unique electronic "folder" created for customer(s)
208
image of customer(s) captured, stored in folder, sent to image proc. software
209
image sent to image processing software
210
customer selects image location(s) within the site using device
250
network
device type
read/write
260
read
211
determine image type
217
"stock" image without customer
215
"stock" image with customer
212
newly captured image with customer
216
store customer selection in folder
213
capture image of customer at image location
214
store captured image at image location in folder
218
customer site visit complete?
219
254, 261

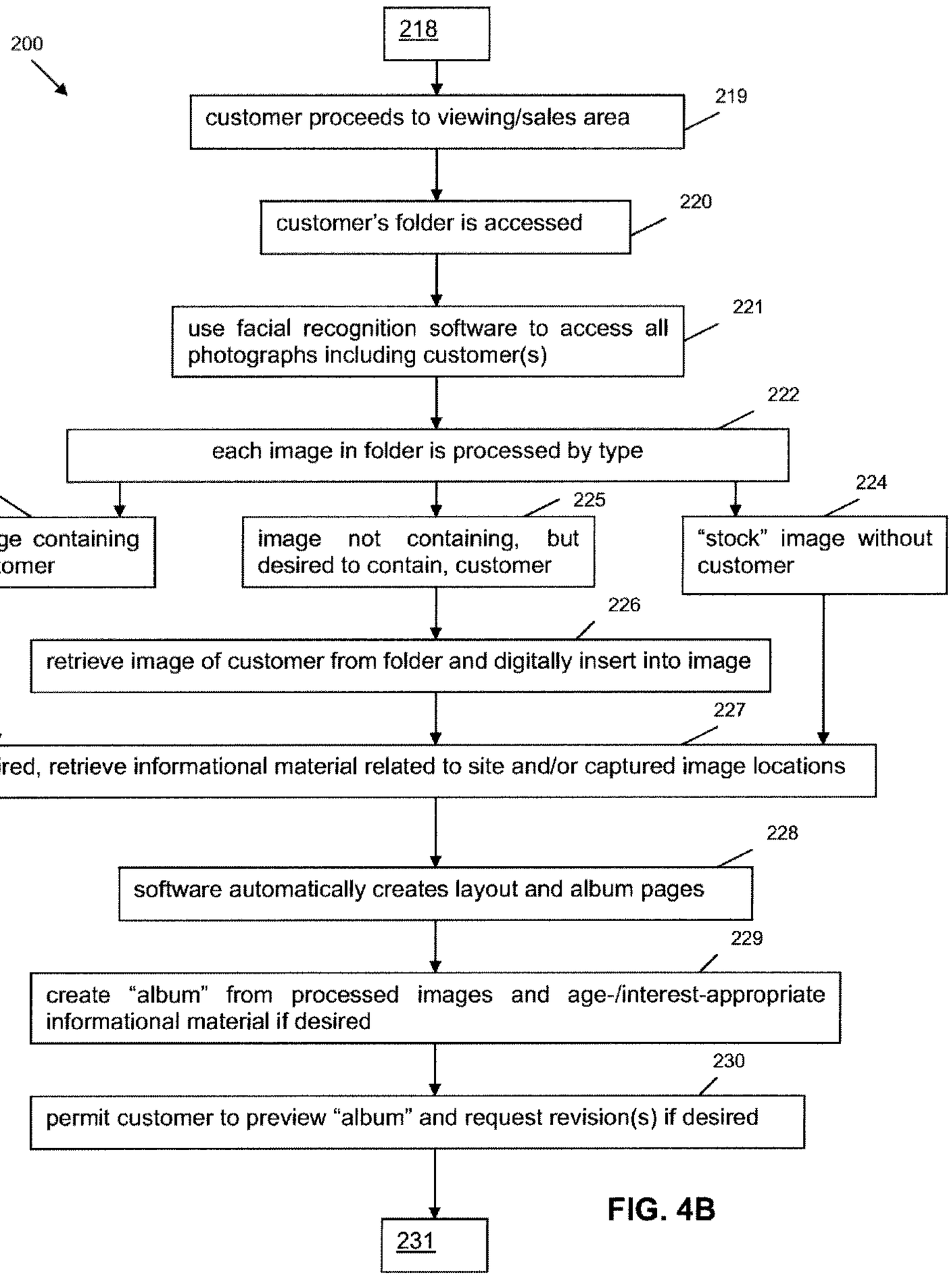

200
218
customer proceeds to viewing/sales area
219
customer's folder is accessed
220
use facial recognition software to access all photographs including customer(s)
221
each image in folder is processed by type
222
223
image containing customer
225
image not containing, but desired to contain, customer
224
"stock" image without customer
retrieve image of customer from folder and digitally insert into image
226
if desired, retrieve informational material related to site and/or captured image locations
227
software automatically creates layout and album pages
228
create "album" from processed images and age-/interest-appropriate informational material if desired
229
permit customer to preview "album" and request revision(s) if desired
230
231

FIG. 4B

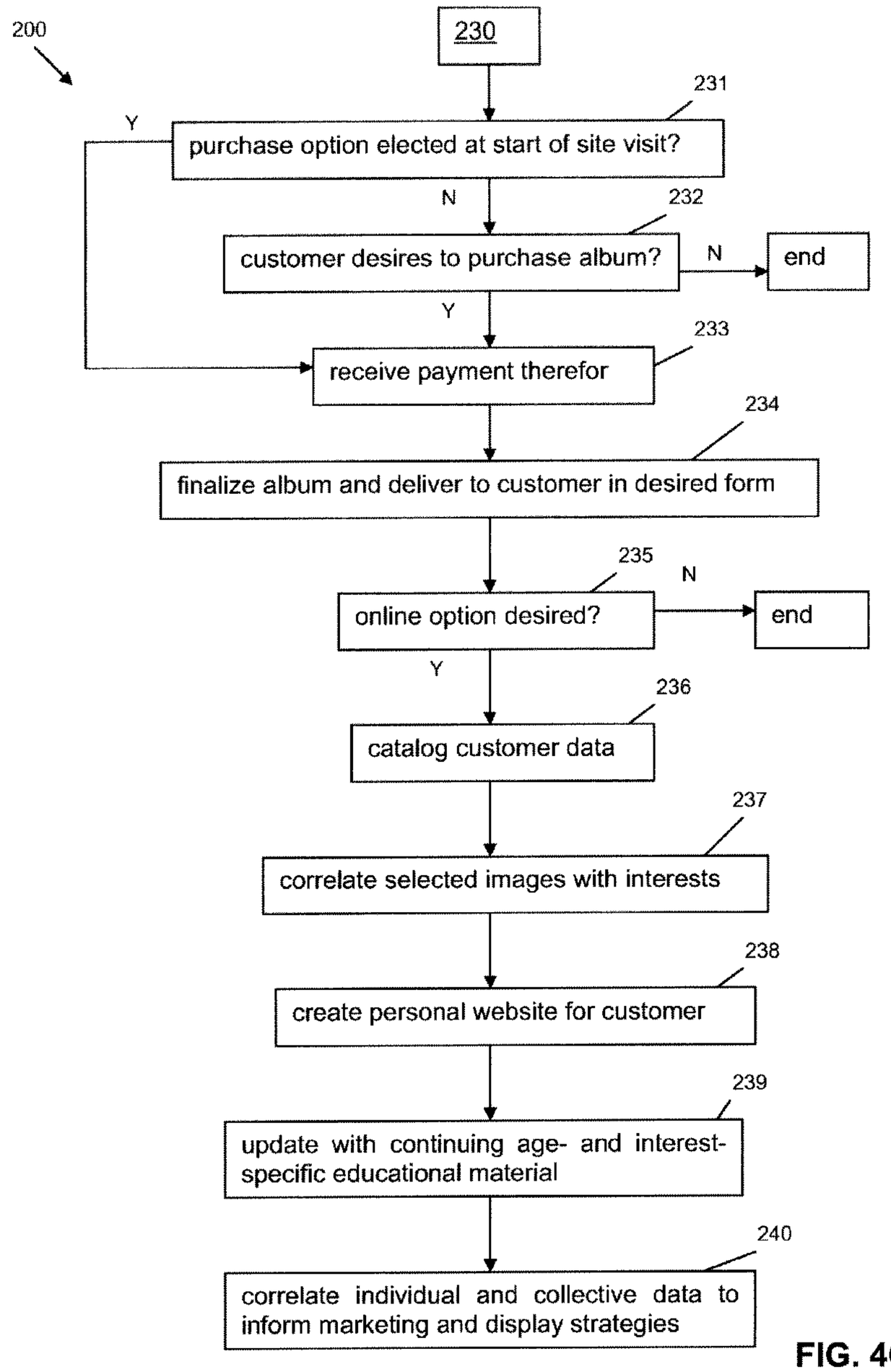

200
230
231
purchase option elected at start of site visit?
Y
N
232
customer desires to purchase album?
N
end
Y
233
receive payment therefor
234
finalize album and deliver to customer in desired form
235
online option desired?
N
end
Y
236
catalog customer data
237
correlate selected images with interests
238
create personal website for customer
239
update with continuing age- and interest-specific educational material
240
correlate individual and collective data to inform marketing and display strategies

FIG. 4C

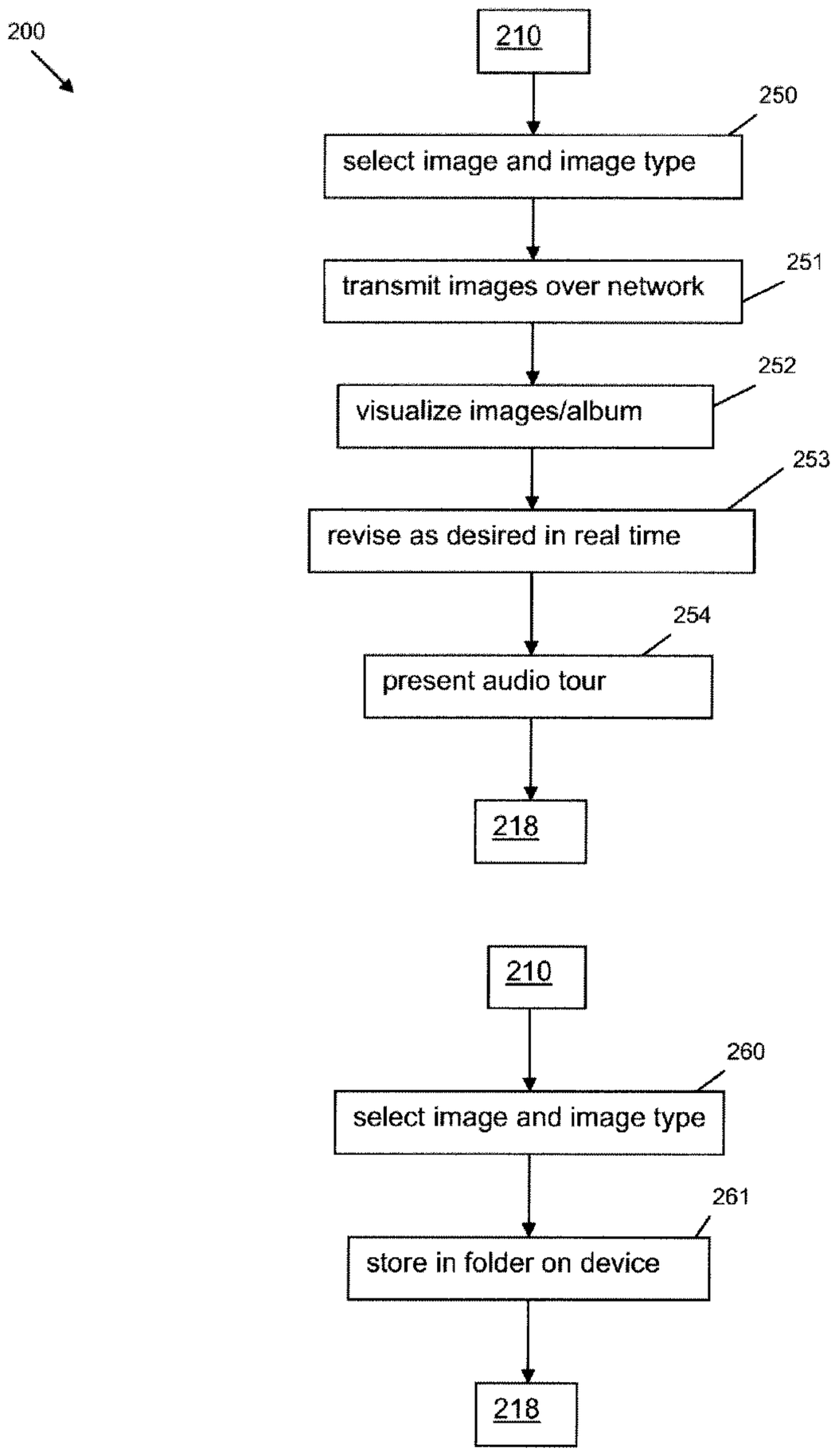
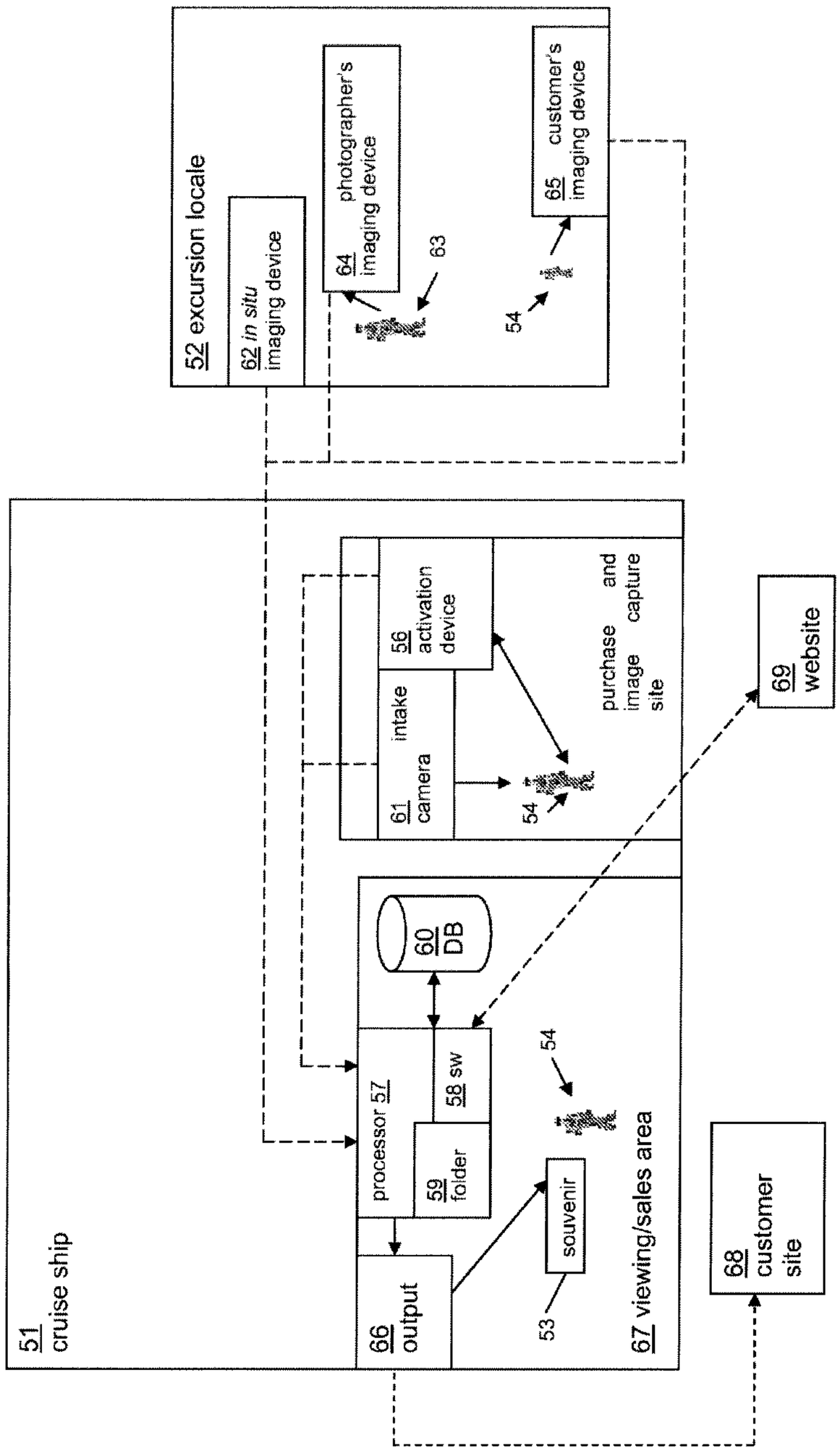

200
210
250
select image and image type
transmit images over network
251
visualize images/album
252
revise as desired in real time
253
present audio tour
254
218
210
260
select image and image type
store in folder on device
261
218

FIG. 4D

FIG. 5


52 excursion locale
62 in situ imaging device
64 photographer's imaging device
63
54
65 customer's imaging device
51 cruise ship
61 camera intake
56 activation device
purchase and image capture site
54
60 DB
processor 57
58 sw
59 folder
54
souvenir
53
67 viewing/sales area
66 output
69 website
68 customer site

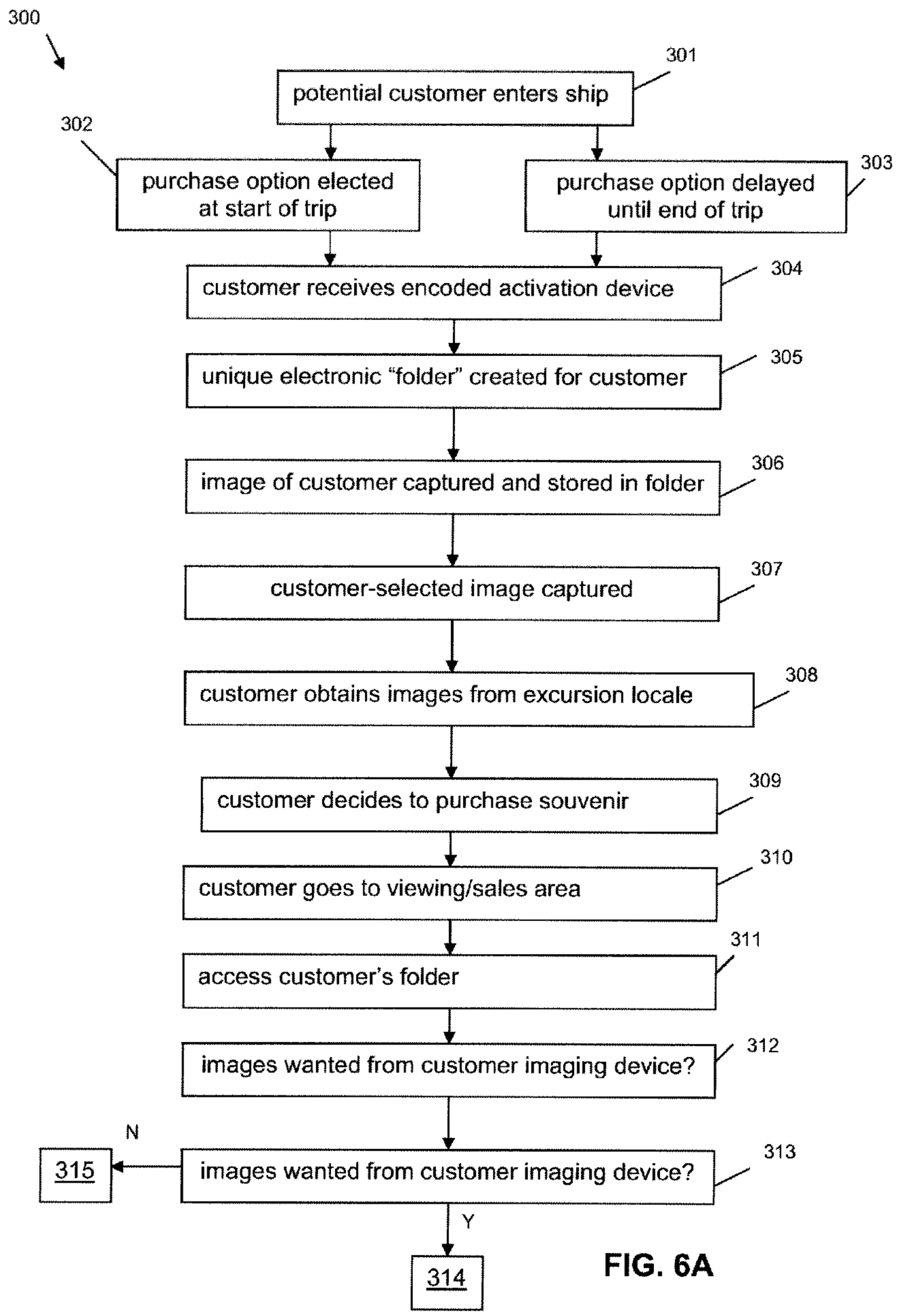

300
potential customer enters ship
301
302
purchase option elected at start of trip
purchase option delayed until end of trip
303
customer receives encoded activation device
304
unique electronic "folder" created for customer
305
image of customer captured and stored in folder
306
customer-selected image captured
307
customer obtains images from excursion locale
308
customer decides to purchase souvenir
309
customer goes to viewing/sales area
310
access customer's folder
311
images wanted from customer imaging device?
312
N
315
images wanted from customer imaging device?
313
Y
314

FIG. 6A

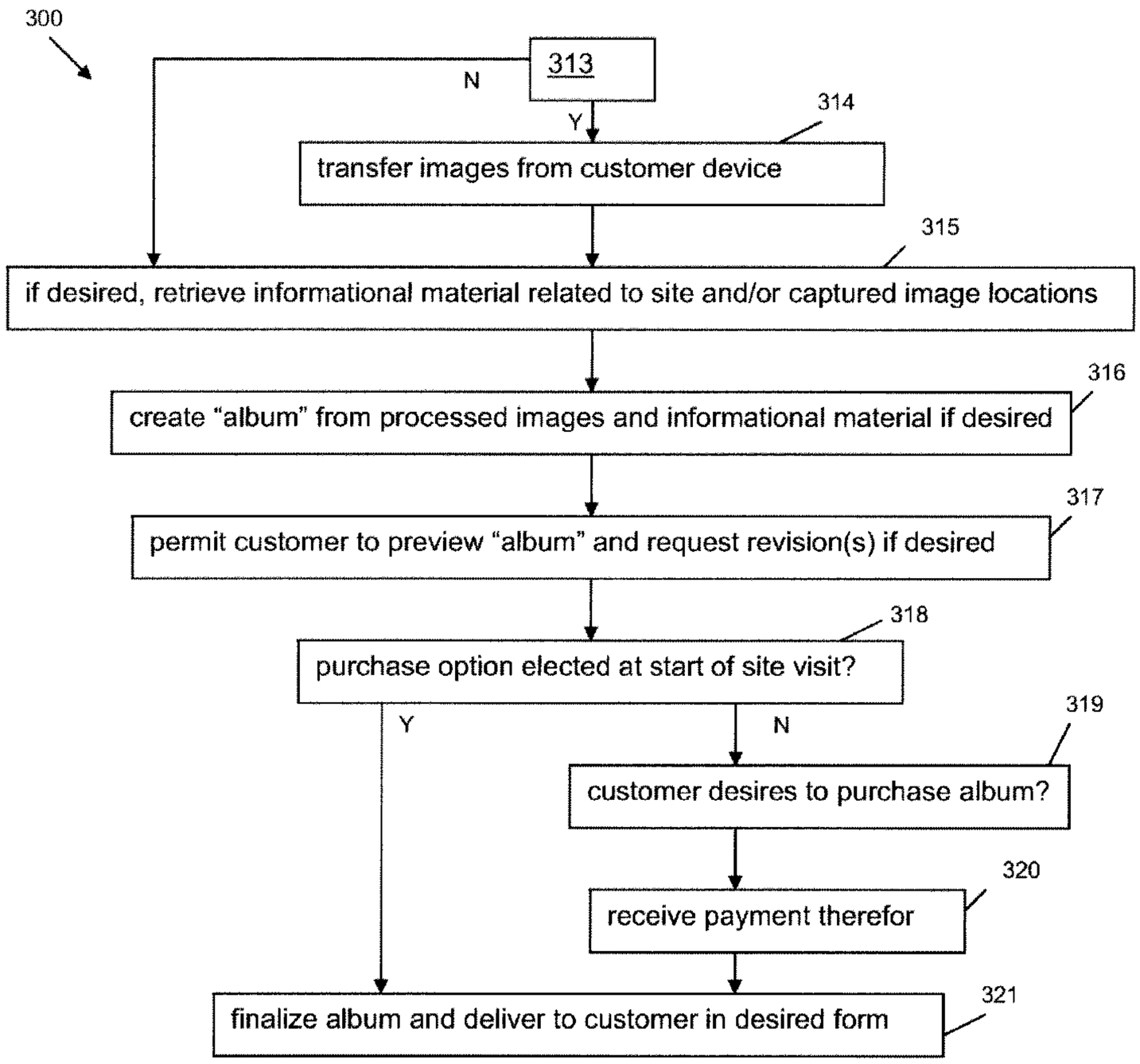

300
313
N
Y
314
transfer images from customer device
315
if desired, retrieve informational material related to site and/or captured image locations
316
create "album" from processed images and informational material if desired
317
permit customer to preview "album" and request revision(s) if desired
318
purchase option elected at start of site visit?
Y
N
319
customer desires to purchase album?
320
receive payment therefor
321
finalize album and deliver to customer in desired form

FIG. 6B

SITE IMAGE CAPTURE AND MARKETING SYSTEM AND ASSOCIATED METHODS

CROSS-REFERENCE TO RELATED APPLICATION

This application claims the benefit of U.S. Provisional Application No. 61/526,823, filed Aug. 24, 2011.

TECHNICAL FIELD

The present invention generally relates to image generation systems and methods, in particular, to photographic systems and methods, and, most particularly, to such systems and methods for capturing and distributing images to a customer visiting a location.

BACKGROUND

The sale of photographs taken by a photographer of a customer of, for example, a theme park, cruise, hotel, resort, or other event where there are large volumes of people present is known in the art. This system has inherent inefficiencies, in that the photographer typically prints many more photographs than are ultimately sold, and the sale is dependent upon the customer's viewing and agreeing to purchase the photograph displayed after the event, thereby losing any momentum caused by the excitement of the moment.

An additional problem with known systems is that images from certain vantage points, and including objects at a site being visited by the customer, which may comprise, for example, still or video images, are typically not possible when taken by a photographer at a defined location within the site. Thus achieving viable perspectives to capture an image at a site from an optimal vantage point may be impossible for the customer.

Another difficulty is that some sites do not permit photography at all, or may not permit flash photography, owing to security and/or photo-damage concerns. Such prohibitions can prevent the customer from capturing desired images that can comprise priceless memories to him/her.

Further, a customer may desire a photograph to be taken at a time when a photographer is not in the vicinity.

Another particular difficulty with photography in general is that there is no really viable system available wherein the photographer him/herself can be in the picture, nor that person with a group. Personal camera equipment is typically not sufficiently sophisticated to produce a good product, and extra equipment, such as tripods, must be hauled along to accomplish self-photos. In the realm of videography, there is no known way to film oneself when the camera is moving. Further, the technical skill of the individual is typically lacking, and good amateur photographs are rare.

Therefore, it would be desirable to provide systems and methods for more efficiently capturing and delivering photographic and/or video images to a customer. It would also be desirable to provide systems and methods wherein the customer him/herself can be a subject of the image. It would be additionally desirable to provide systems and methods for distributing a collection of images captured at a site.

SUMMARY

The present invention in one aspect is directed to a system and method for capturing a digital image, and preferably a collection of digital images, of a customer in a defined location, such as a museum, a garden, a zoo, a religious institution, a theme park, a cruise ship, a resort, a hotel, or any such site known in the art. The system and method provide a customer with a pictorial souvenir of a visit to the site that could not be accomplished by means known in the art. The souvenir can include other elements, such as "stock" images and/or descriptive verbiage or other indicia, alone or having had an image of the customer digitally inserted thereinto.

The features that characterize the invention, both as to organization and method of operation, together with further objects and advantages thereof, will be better understood from the following description used in conjunction with the accompanying drawing. It is to be expressly understood that the drawing is for the purpose of illustration and description and is not intended as a definition of the limits of the invention. These and other objects attained, and advantages offered, by the present invention will become more fully apparent as the description that now follows is read in conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a system schematic of an embodiment of an image capture system for use in a defined location.

FIGS. **2**A-**2**B is a flowchart of exemplary methods of capturing an image in a defined location.

FIG. **3** is a system schematic of another embodiment of an image capture system.

FIGS. **4**A-**4**D is a flowchart of another exemplary method of capturing an image in a defined location.

FIG. **5** is a system schematic of a further embodiment of an image capture system for use in a defined time period.

FIGS. **6**A-**6**B is a flowchart of exemplary methods of capturing an image in a defined time period.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

A description of the preferred embodiments of the present invention will now be presented with reference to FIGS. **1**-**6**B.

The present invention in one aspect is directed to a system **10** (FIG. **1**) and method **100** (FIGS. **2**A,**2**B) for capturing a digital image of a customer **11** in a defined location. The system **10** and method **100** are preferably for use in a defined location, or site **12**, such as, but not intended to be limited to, a museum, a garden, a zoo, a religious institution, a theme park, a resort, a hotel, or any such site known in the art. The system **10** and method **100** provide a customer with a pictorial souvenir **13** of a visit to the site **12** that could not be accomplished by means known in the art. It will be understood by one of skill in the art that the words picture, image, camera, and photograph are not intended to be limited to a particular construction, and that still and moving images and recording devices can be contemplated thereby, and may include other media such as sound.

In a particular embodiment, a potential customer **11** enters a site **12** that has been outfitted with components for creating a pictorial memento **13** of the visit (block **101**). The opportunity to purchase this souvenir **13** can be offered to the customer **11** upon entering the site **12**, for example, at a pre-visit purchase and image capture site **14**, an offer that can be accepted (block **102**) or rejected (block **103**) by the customer **11**. In either case, the customer **11** can be given an encoded activation device **15** (block **104**), which can comprise, for example, a card with a readable magnetic stripe such as known in the art. This device can also comprise the custom-

er's cell phone or a remote control device, or any other such device capable of transmitting a signal such as known in the art.

A protocol is established for communication between the activation device **15** and a processor **16**, which has software **17** for creating a folder **18** specific to the customer **11** (block **105**). In one embodiment, an initial image of the customer **11** can be captured by an intake camera **19** and stored in the folder (block **106**), for example, using "green screen" technology so that the customer's image can be embedded subsequently in other images if desired.

As the customer **11** is touring the site **12**, s/he may desire to capture an image of and/or with an object at the site **12** (block **107**). There are several ways in which this may be accomplished, although these examples are not intended to be limiting. In one case, the customer **11** may desire to be imaged with a first object **20** at a first image location **21** (block **109**). The customer **11** uses the activation device **15** to contact a first receiver **22** (block **108**), which is in signal communication with the processor **16**. A first customer image spot **23** is indicated near the first object **20**, and a first image location camera **24** images the customer **11** (block **110**) and transmits the image to the processor **16**, which stores the image in the customer's folder **18** (block **111**).

Another option includes the customer **11** desiring his/her image to be inserted into a scene with a second object **25**, for example, at a second location **26** (block **112**). Again, the customer **11** uses the activation device **15** to contact a second receiver **34**, which communicates the customer's order to the processor **16**, which stores the order in the folder **18** (block **113**).

A further option includes the customer **11** desiring a reproduction of an image of a third object **27** at a third image location **28**, without the customer image therein (block **114**). The customer **11** uses the activation device **15** to contact a third receiver **29**, which communicates this order to the processor **16**, which in turn stores the order in the folder **18** (block **113**).

In some embodiments it may be desirable that the camera **24** be placed so as to capture an object that can move, for example, a ride in an amusement park, a performer, or an animal in a zoo. In this case, the camera **24** may be mounted for movement on a platform **36** that can be placed in signal communication with the activation device **15**. This configuration would permit the customer **11** to control camera **24** movement to capture a desired object within range of the camera's panning ability.

It will be understood by one of skill in the art that other methods of communication and customer identification can be used. For example, instead of having an activation device **15**, one or more forms of biometric identification could inform the system as to the customer's identity, such as, but not intended to be limited to, fingerprint, iris scan, and facial recognition. As facial recognition technology is not yet exact, additional data can be collected to increase the chance that the system will recognize a particular customer, such as searching for a particular item of clothing or color worn by the customer, imaging more than one customer at a time (for example, a companion), or imaging a numerical identifier worn by the customer.

In addition, the location of the customer can be determined "passively," by GPS **35** sensing of the customer's activation device **15**. This option also permits the system to sense the customer's location and associate the location with data stored in a database **31** in signal communication with the processor **16**.

In another embodiment, the image location **21**,**26**,**28** could have signage indicating a telephone number for the customer to call. The system could then use the caller **10** from the customer's telephone to associate the customer's folder **18** with the location **21**,**26**,**28**.

This process can be repeated until the customers visit is complete (block **115**), at which time s/he can proceed to the viewing/sales area **30** (block **116**) if desired. Using the activation device **15**, the customer's folder **18** is accessed (block **117**). Each image and order in the folder **18** is processed according to type (block **118**). An image containing a customer **11** is retrieved from the folder **18** (block **119**), and a "stock" image without the customer **11** is retrieved from the database **31** (block **120**). For those images wherein the customer **11** wishes to be inserted (block **121**), the associated "stock" image is retrieved from the database **31**, and the customer's image, as taken in step **106**, is inserted thereinto digitally (block **122**).

The customer **11** can also have the option to have the souvenir **13** enhanced with material stored in the database **31**, such as informational textual material and/or additional images (block **123**). For example, in a museum, didactic material relating to a particular objet d'art could be inserted. A complete "album" can then be digitally created (block **124**), and the customer **11** can preview the album on an output device **32** and request revisions as desired (block **125**).

If the souvenir **13** had not been purchased at the start of the visit (block **124**), and if the customer **11** wishes to purchase the souvenir **13** (block **127**), payment is received (block **128**).

The final souvenir **13** is then delivered to the customer **11** in one or more forms known in the art (block **129**). For example, the souvenir **13** can take the form of a physical, printed album, which could be printed and bound on site. Alternatively, the souvenir **13** can take the form of a digital record, for example, stored on media. Further, the souvenir **13** can take the form of a digital record transmitted to the customer **11** at a desired site **33**. The digital media and record can contain both still and moving images as desired.

The final souvenir **13** can comprise multiple forms and components as desired. For example, an album could include material suitable for entertaining children, such as a coloring book, which would serve the purpose of being both amusing and educational.

Further, some of the cost of producing the souvenir **13** can be defrayed by including advertising. The advertising could be "stock," that is, directly related to the site itself or the surrounding area (local restaurants, shops, etc.). Alternatively, the advertising could be targeted to the customer from data gleaned on customer demographics and customer preferences, as determined by the software **17** from the material selected by the customer. For example, if the customer is in a museum with dissimilar items, but the customer gravitates to a particular type of display (e.g., medieval art, Civil War, etc.), correlations can be made as to vendors and merchandise that might appeal to the customer. Such preferences can then be used, not only to select advertising to appear in the souvenir **13**, but also for subsequent marketing opportunities to the customer via, for example, email or direct mail marketing campaigns.

In another embodiment a system **50** (FIG. **3**) for use in a defined location and a method **200** (FIGS. **4A-40**) are provided that can embrace additional features. FIG. **3** is a system schematic that incorporates similar elements as in FIG. **1** discussed above, with common numerals indicative of common elements.

In the defined-location embodiment **50**,**200**, a potential customer **11** enters the site **12** that has a membership option

(block **201**). The opportunity to purchase a souvenir **13** can be offered to the customer **11** upon entering the site **12**, as above, an offer that can be accepted (block **202**) or rejected (block **203**) by the customer **11**. The customer **11** is queried as to whether s/he is already a member (block **204**). If so, the customer's membership card or other device is read, for example, by scanning **15'** (block **205**); otherwise, the customer receives a device such as a scannable card, and the customer's pertinent data are captured (block **206**), which can include a photograph/image in some embodiments, and also can include data such as age, which will be used as a basis upon which to include such material as informational narrative. The word "card" is being used herein without limitation, and one of skill in the art will appreciate that any device that can communicate in such a way as to identify the user is intended to be subsumed herein. For example, a read-only or a read/write card could be used, with a magnetic strip such as known in the art. Further "smart" devices such as cellular telephones and media playing devices can also be used.

The software **17** creates a folder **18** specific to the customer **11** (block **207**). An image of the customer **11**, which can comprise an image of the customer with those accompanying him/her, can be captured by the intake camera **19** and stored in the folder (block **208**) and also sent to image-processing software (block **209**).

As the customer **11** is touring the site **12**, s/he may indicate a desire to capture an image of and/or with an object at the site **12** with the device (block **210**). The selection and communication procedure can then proceed in at least two ways, which is determined by the type of device being used (block **210***a*) and the site configuration (block **211**). For example, for a device that does not have "write" capabilities, the following steps are taken.

There are several ways in which the device may be used, although these examples are not intended to be limiting. In one case, the customer **11** may desire to be imaged with a first object **20** at a first image location **21** (block **212**). The customer **11** uses his/her device to contact a first receiver **22**, which is in signal communication with the processor **16**. A first customer image spot **23** is indicated near the first object **20**, which can be accomplished with visual means such as known in the art. Visual and/or audio means can also be used to "count down" until the shot is taken. A first image location camera **24** images the customer **11** (block **213**) and transmits the image to the processor **16**, which stores the image in the customer's folder **18** (block **214**).

Another option includes the customer **11** desiring his/her image to be inserted into a scene with a second object **25**, for example, at a second location **26** (block **215**). Again, the customer **11** uses the device to contact a second receiver **34**, which communicates the customer's order to the processor **16**, which stores the order in the folder **18** (block **216**).

A further option includes the customer **11** desiring a reproduction of an image of a third object **27** at a third image location **28**, without the customer image therein (block **217**). The customer **11** uses the device to contact a third receiver **29**, which communicates this order to the processor **16**, which in turn stores the order in the folder **18** (block **216**).

In some large installations, particularly those that can become crowded, it may be difficult to approach certain popular objects. In such cases, a multi-purpose kiosk **42** having interactivity, via, for example, a touch screen, could be provided wherein a plurality of images of objects in the installation could be displayed, from which the user could select one or more images for inclusion in his/her folder. Such a kiosk **42** could also be used to view the customer's folder in progress.

Returning to block **210**, in some cases a device may be used that is in signal communication with the processor **16**. An image is selected as above in blocks **211-217** (block **250**). In addition, in such a case the software **17** can be used to transmit images over a network (block **251**) so that the customer **11** can visualize the images as they could appear in a finished souvenir product (block **252**), and thereby modify selections and captured images in "real time" if desired, which can include re-taking the image (block **253**). Also, if desired, such a device can be used to present an audio and/or visual tour (block **254**) through the site **12**. This device could also be used in other ways known in the art, especially as such devices evolve, such as providing information on using the system **50**, instructions on where to stand to have an image taken, how far along the customer is on the tour, etc. These examples are not intended to be limiting, and one of skill in the art will appreciate that such devices can be used in a myriad of ways interactively with the customer and the system.

Again returning to block **210**, another process can be used to select images, if the device has read/write capabilities. This device can be used to store data instead of transmitting the data to the processor **16** during the customer's travels through the site **12**.

In this embodiment, the customer **11** selects an image type as above in blocks **211-217** (block **260**). An image identifier and the selected image type are then stored in a folder on the device (block **261**).

The viewing and selection processes can be repeated until the customer's visit is complete (block **218**), at which time s/he can proceed to the viewing/sales area **30** (block **219**) if desired. Using the device, the customer's folder **18** is accessed, whether from the processor **16** or the device (block **220**). Either the stored information or facial recognition software can be used to access all photographs having been taken that include the customer **11** (block **221**). A benefit of having used multiple people in the customer image is that additional faces can aid in increasing the probability that the correct customer has been identified by a significant degree. For example, at present facial recognition software is known to be 70-80% accurate, whereas the addition of other data, such as other faces, clothing color, etc., can bring the probability close to 100%.

Each image and order in the folder **18** is processed according to type (block **222**). An image containing a customer **11** is retrieved from the folder **18** (block **223**), and a "stock" image without the customer **11** is retrieved from the database **31** (block **224**). For those images wherein the customer **11** wishes to be inserted (block **225**), the associated "stock" image is retrieved from the database **31**, and the customer's image, as taken in step **208**, is inserted thereinto digitally using techniques known in the art such as background replacement (block **226**).

The customer **11** can also have the option to have the souvenir **13** enhanced with material stored in the database **31**, such as age-appropriate informational textual material and/or additional images (block **227**). For example, in a museum, didactic material relating to a particular objet d'art could be inserted.

Once the image collection is complete, the software **17** can be used to begin to create the customer's "album." If the album is to be a physical object, there will typically be size limitations. The software **17** has a module for creating album pages automatically (block **228**), making determinations as to page layout and relative size of images, for example. The software **17** can also select a layout and graphics based upon the customer's age. A complete "album" can then be digitally created (block **229**), and the customer **11** can preview the

album on a display **37** and request revisions as desired, which can be entered via an input device **38** (block **230**). The "album" can be in any form known in the art. If a DVD-type souvenir is selected, stock video clips could form part of the souvenir **13**.

If the souvenir **13** had not been purchased at the start of the visit (block **231**), and if the customer **11** wishes to purchase the souvenir **13** (block **232**), payment is received (block **233**).

The final souvenir **13** can be delivered to the customer **11** in one or more forms known in the art (block **234**), as discussed above.

In addition to, or instead of, a physical souvenir **13**, an online option can be selected (block **235**). If so, the customer data are cataloged (block **236**). The images selected are correlated to determine the customers interests (block **237**). Then a person website **40** can be created for the customer **11** (block **238**), which can be updated periodically with continuing age- and interest-specific educational and informational materials (block **239**), and is accessible over the internet **41**.

A system **70** (FIG. **5**) and method **300** for use in a defined time period operates similarly to the system **10** and method **100** discussed above, with common reference numerals referring to analogous elements.

The system **70** and method **300** are preferably for use in a defined time period within one or more or sites, such as, but not intended to be limited to, a cruise ship **51** or other touring vehicle used as a base of operations and at least one side excursion site, such as a locale **52** visited as a day trip from a cruise ship **51**, or any such sites known in the art. Herein the system and method will be discussed in terms of a cruise ship with side excursions, but this is not intended as a limitation, and is only used for ease of discussion.

The system **70** and method **300** provide a customer with a pictorial souvenir **53** of a vacation/tour that could not be accomplished by means currently known in the art. It will be understood by one of skill in the art that the words picture, image, camera, and photograph are not intended to be limited to a particular construction, and that still and moving images and recording devices can be contemplated thereby, and may include other media such as sound.

In a particular embodiment, a potential customer **54** enters a cruise ship **51** that has been outfitted with components for creating a pictorial memento **53** of the vacation (block **301**). The opportunity to purchase this souvenir **53** can be offered to the customer **54** upon entering the ship **51**, for example, at a pre-visit purchase and image capture site **55**, an offer that can be accepted (block **302**) or rejected (block **303**) by the customer **54**. In either case, the customer **54** can be given an encoded activation device **56** (block **304**), which can comprise, for example, a key card with a readable magnetic stripe or other storage medium such as known in the art. This device can also comprise the customer's cell phone or a remote control device, or any other such device capable of transmitting a signal such as known in the art.

A protocol is established for communication between the activation device **56** and a processor **57**, which has software **58** for creating a folder **59** specific to the customer **54** (block **305**), which is storable on a database **60** in signal communication with the processor **57**. In one embodiment, an initial image of the customer **54** can be captured by an intake camera **61** and stored in the folder **59** (block **306**), for example, using "green screen" technology so that the customer's image can be embedded subsequently in other images if desired.

On the cruise ship, the customer **54** may desire to capture an image of and/or with an object (block **307**) or other people, such as a dining group. There are several ways in which this may be accomplished, as discussed above, and these options will not be repeated here. Suffice it to say that images of the types previously described above with reference to blocks **109**,**112**,**114** (FIG. **2**A) can be collected and stored in the customer's folder **59**.

If the customer **54** travels off the cruise ship **51** to a shore excursion locale **52**, analogous opportunities exist for images to be collected (block **308**), whether via an automated process with an in situ imaging device **62** or a human photographer **63** operating an imaging device **64**. Images can also be taken by an imaging device **65**, preferably digital, operated and/or owned by the customer **54**. The customer's imaging device **65** can comprise any device known in the art, such as, but not intended to be limited to, a still camera, a video camera, and a cellular telephone having a camera associated therewith. If the customer's imaging device **65** has the capability, one or more of these collected images can be transmitted to the processor **57** for incorporation into his/her folder **59**.

When the customer desires to complete a trip souvenir **53**, which typically occurs at or near the end of the trip (block **309**), s/he can proceed to a viewing/sales area **66** (block **310**) if desired. Using the activation device **56**, the customer's folder **59** is accessed (block **311**). If the customer **54** wishes to augment the folder **59** with images from his/her own imaging device **65** (block **312**), a transfer of such images can be made (block **313**). The images are then processed as outlined above (block **314**). One of skill in the art will appreciate that the customer **54** does not necessarily need to go to a physical location, and that these steps can be completed via computer from any location on the ship, or even elsewhere, on long as connectivity is achieved.

Also as above, the customer **54** can have the option to have the souvenir **53** enhanced with material stored in the database **60**, such as informational textual material and/or additional images (block **315**). For example didactic material relating to a particular locale **52** that was visited could be inserted, or historical information on the ship **51**. A complete "album" can then be digitally created (block **316**), and the customer **54** can preview the album on an output device **67** and request revisions as desired (block **317**).

If the souvenir **53** had not been purchased at the start of the visit (block **318**), and if the customer **54** wishes to purchase the souvenir **53** (block **319**), payment is received (block **320**).

The final souvenir **53** is then delivered to the customer **54** in one or more forms known in the art (block **321**). For example, the souvenir **53** can take the form of a physical, printed album, which could be printed and bound on site. Alternatively, the souvenir **53** can take the form of a digital record, for example, stored on media. Further, the souvenir **53** can take the form of a digital record transmitted to the customer **54** at a desired site **68**. Additionally, the souvenir **53** can be presented on a website **69** created for the customer **54** in connection with the trip. The digital media and record can contain both still and moving images as desired.

The final souvenir **53** can comprise multiple forms and components as desired. Further, as above, some of the cost of producing the souvenir **53** can be defrayed by including advertising.

The many advantages offered by the systems **10**,**50**,**70** and methods **100**,**200**,**300** of the present invention will be understood by one of skill in the art. The customer **11**,**54** receives a professionally imaged and assembled souvenir **13**,**53** containing images typically not possible to be achieved by the customer **11**,**54** him/herself, whether owing to perspective, vantage point, or quality, and retain all the pleasures of the visit without having to take photographs him/herself. Professional photographers are not required, since the cameras will have been set to take an optimal image, and all else is auto-

mated. "Stock" images will have been taken and stored under ideal conditions of lighting and vantage point, thereby minimizing the chance of causing damage to the objects by excess light.

Additionally, the interactivity of the systems **10**,**50**,**70** and methods **100**,**200**,**300** enable data to be collected on customers **11**,**54** as to their preferences individually and collectively, which can be used to inform subsequent marketing and display strategies (block **240**), including providing suggestions to the customer **11**,**54** as to other attractions that might be of interest, based upon the customer's stored preferences.

In the case of some venues such as, without limitation, sports arenas, theme parks and museums, a customer's smart phone or tablet can serve as the activation device. For example, the phone can be provided with an application that establishes a communication link with a central computer that also communicates with automated cameras that are at selected locations in the venue and is configured through appropriate programming to operate the entire system. The customer can be offered such an application for downloading into the customer's phone or tablet, of an already configured phone or tablet can be loaned to the customer. The customer's phone or tablet can be provided with an icon that, when clicked or tapped, serves to indicate to the central computer to instruct an automated camera pointed to the current location of the customer, or to a location that the customer would like to have imaged for potential inclusion in the customer album, to take one or more images. The central computer can transmit the customer's album to the customer's phone or tablet at times selected by the customer or the system, so that the customer can view the album as it is being built and can edit the album by deleting images or other material or re-arranging images and other material, thus providing immediacy that is believed to encourage customers to have more images taken and to purchase an album. The customer's locations can be tracked automatically, for example through the use of the GPS capability embedded in the phone or tablet. The album may be delivered to the customer's phone or table via WiFi or some other electronic link, so that the customer need not take time to stop and pick up a hard copy of the album. In addition, after any editing the customer's album can become a book-like product that is printed at the venue or at another location. The customer's phone or table can further provide an audio input that is transmitted to the central computer to be merged with images in the customer's folder, for example to provide audio captions to the images.

As another example, the activation device can trigger the automated image taking by being present at a specified location. For example, ski resorts, marathon or parade routes, or other venues can be provided with sensors to detect the proximity of a device carried by the customer, such as an RF tag. The tags are associated with respective customers, so that an image of the customer is automatically taken when the customer is at the sensed locations and is added to the customer's album.

In the foregoing description, certain terms have been used for brevity, clarity, and understanding, but no unnecessary limitations are to be implied therefrom beyond the requirements of the prior art, because such words are used for description purposes herein and are intended to be broadly construed.

Moreover, the embodiments of the systems illustrated and described herein are by way of example, and the scope of the invention is not limited to the exact details of construction and use.

The invention claimed is:

1. An automated method of producing an album comprising images of and/or for a customer, comprising:

(a) providing a customer with an activation device and creating an electronic customer's folder;

(b) upon receipt of a signal from the customer activation device indicating that the customer desires an image to he taken of a specified location that includes the customer's location, activating an automated camera system to image the specified location;

(c) electronically storing the image in the customer's folder;

(d) repeating steps (b) and (c) in response to signals from the customer pertaining to other specified locations;

(e) selectively adding, to the customer's folder, stock images that do not include the customer and composited images that include the customer;

(f) displaying to the customer at least some of the images that have been stored in the customer folder;

(g) electronically creating a customer album containing at least some of the images that were displayed to the customer;

(h) transmitting at least a portion of the album over a network to a cellular telephone carried by or for the customer so that the customer can visualize the images and thereby modify selections and images in real time;

(i) providing an editing facility configured to edit the customer album to thereby create an edited album; and

(j) finalizing the album, delivering the finalized album to the customer, and receiving payment for the finalized album.

2. The method of claim **1** in which the activation device comprises an electronic device that identifies positions of the customer.

3. The method of claim **1** in which the automated camera is at a fixed location and is in communication with the activation device through the medium of a computer system.

4. The method of claim **1** including using a computer system to track customer movement and to include in said album additional material selected based on the tracked movement.

5. The method of claim **4** in which said additional material comprises advertising or promotional material related to the tracked movement.

6. The method of claim **1**, including augmenting the customer album with images taken with a customer's imaging device.

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