US009147004B2

(12) **United States Patent**
Coursol

(10) **Patent No.: US 9,147,004 B2**
(45) **Date of Patent: Sep. 29, 2015**

(54) **WEBSITE BUILDER SYSTEMS AND METHODS WITH DEVICE DETECTION TO ADAPT RENDERING BEHAVIOR BASED ON DEVICE TYPE**

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(21) Appl. No.: **13/606,329**

(22) Filed: **Sep. 7, 2012**

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(51) **Int. Cl.**
G06F 17/22 (2006.01)
G06F 17/30 (2006.01)

(52) **U.S. Cl.**
CPC ***G06F 17/3089*** (2013.01)

(58) **Field of Classification Search**
CPC G06F 17/2247
USPC 715/234
See application file for complete search history.

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"Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration," issued on Mar. 20, 2014 by the European Patent Office for International Application No. PCT/US2013/051186.

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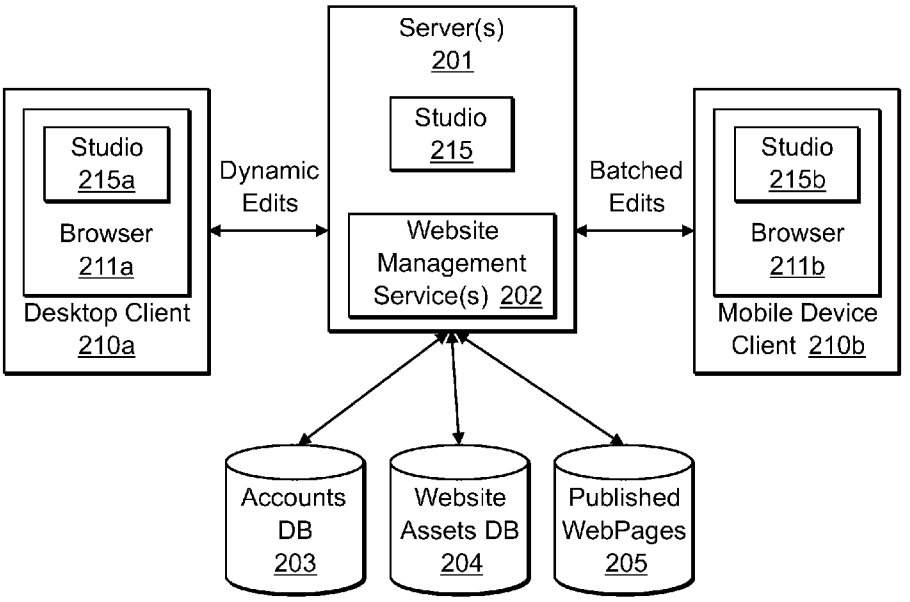
(74) *Attorney, Agent, or Firm* — Jessica Costa

(57) **ABSTRACT**

Mobile website building tools which may be used to build a mobile-ready website from a mobile device includes a design studio application downloaded for executing on the mobile device. The design studio application detects a device type and enables dynamic preview rendering if the device type is a traditional computing device, and for device types that are mobile devices, batches user modifications to a website under construction until a preview or save request is made by the user.

14 Claims, 49 Drawing Sheets



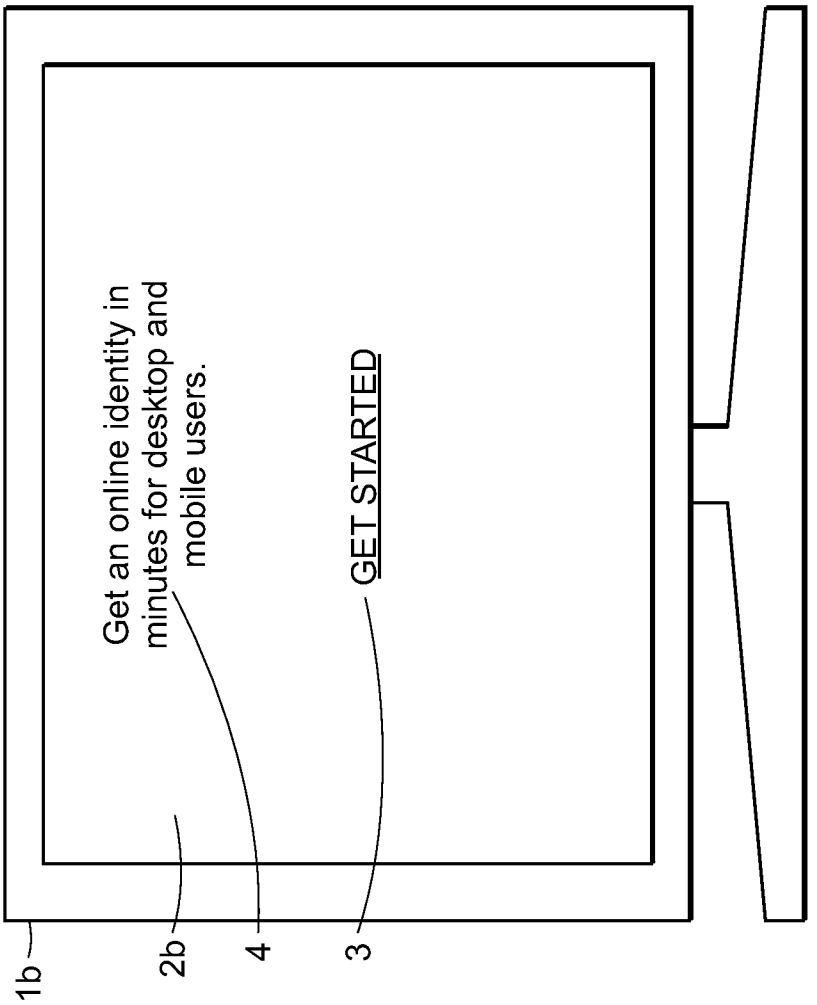

Get an online identity in minutes for desktop and mobile users.
GET STARTED
1b
2b
4
3

FIG. 1B

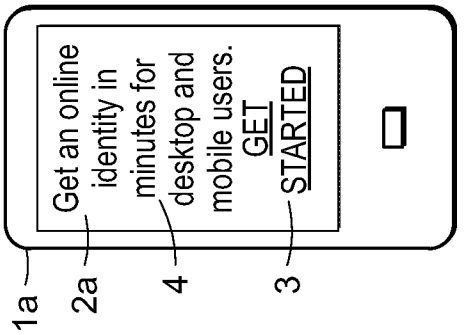

Get an online identity in minutes for desktop and mobile users.
GET STARTED
1a
2a
4
3

FIG. 1A

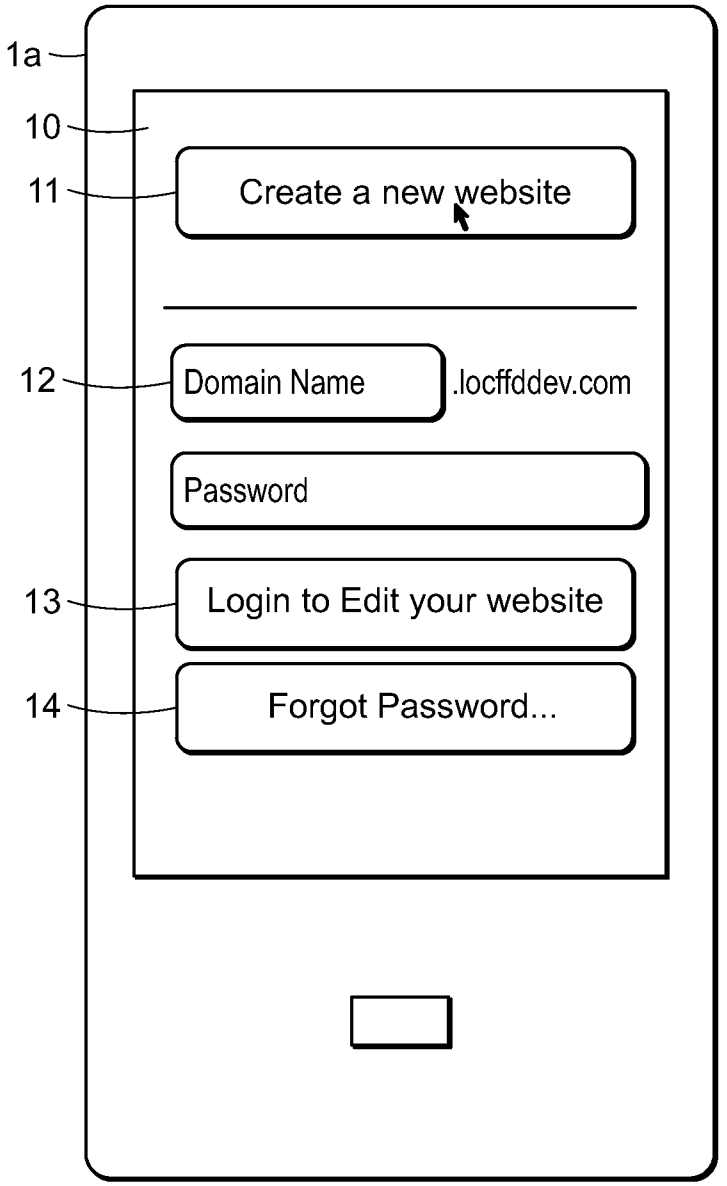

1a
10
11
Create a new website
12
Domain Name
.locffddev.com
Password
13
Login to Edit your website
14
Forgot Password...

FIG. 2

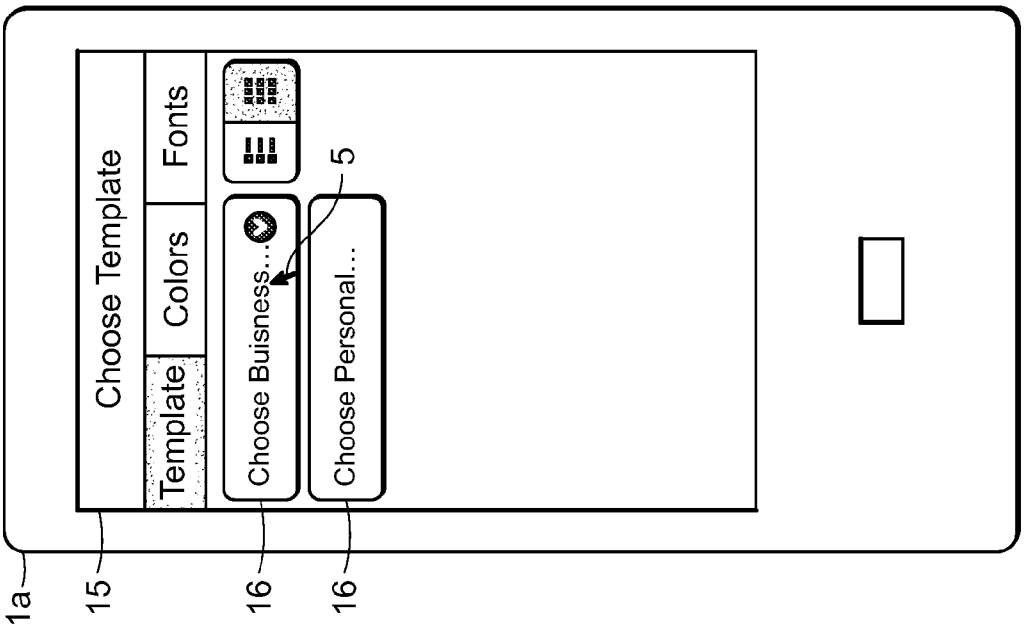
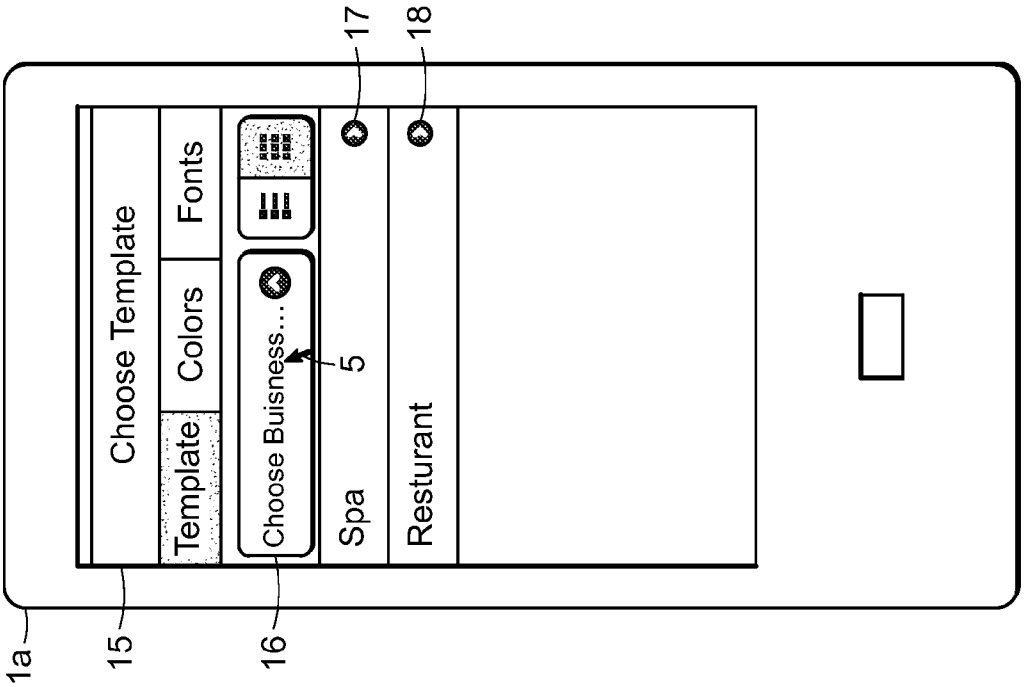

Choose Template
Template
Colors
Fonts
Choose Buisness...
Choose Personal...
5
1a
15
16
16

FIG. 3


Choose Template
Template
Colors
Fonts
Choose Buisness...
5
Spa
Resturant
1a
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17
18

FIG. 4

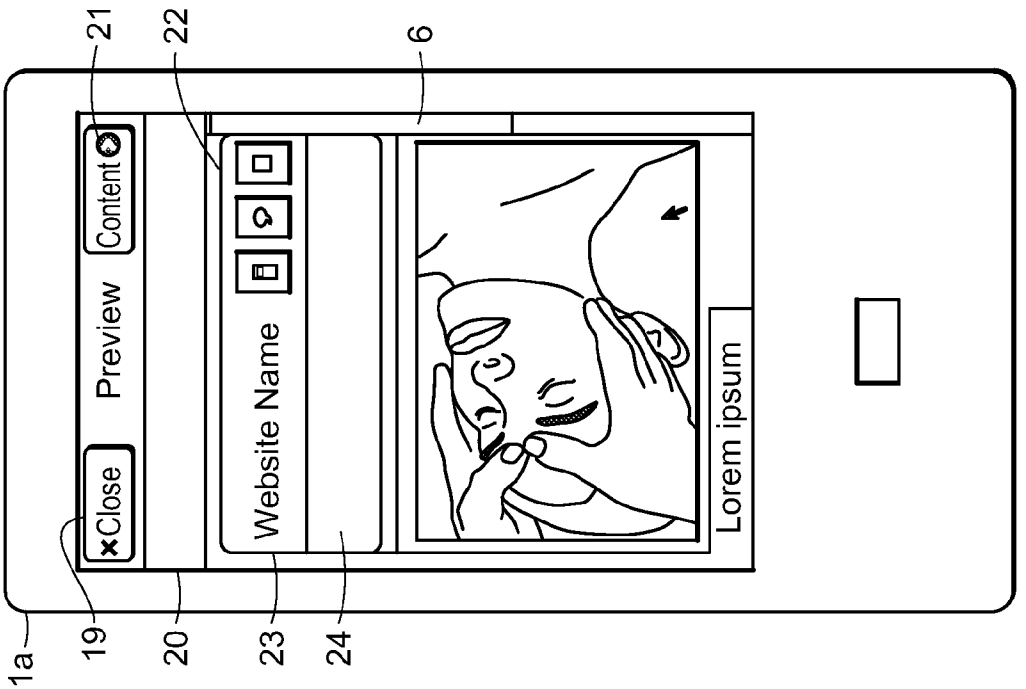
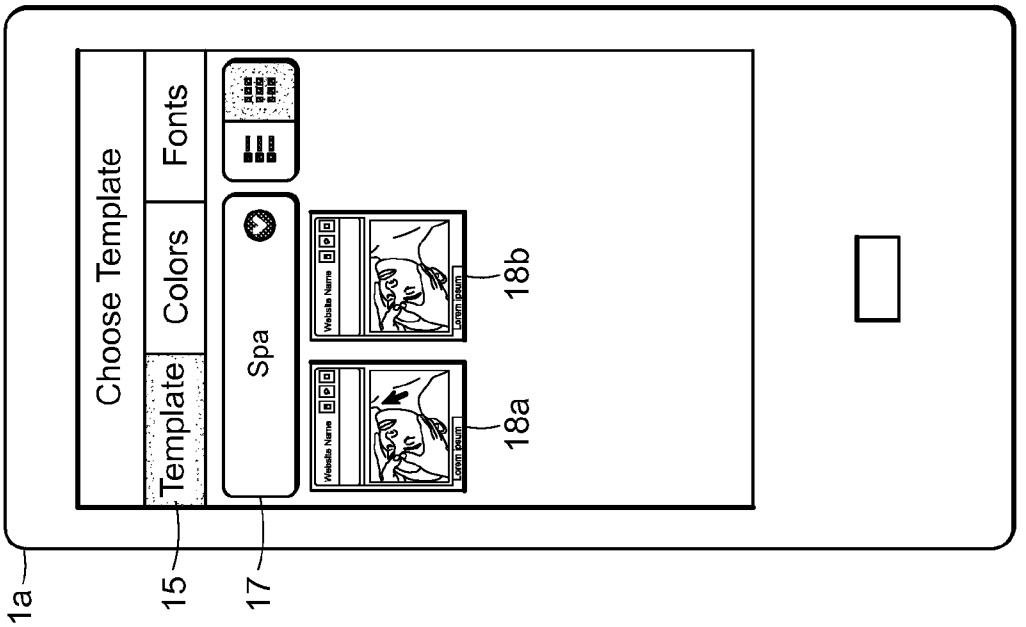

1a
19
20
23
24
21
22
6
Close
Preview
Content
Website Name
Lorem ipsum

FIG. 6


1a
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17
Choose Template
Template
Colors
Fonts
Spa
Website Name
Lorem ipsum
18a
18b

FIG. 5

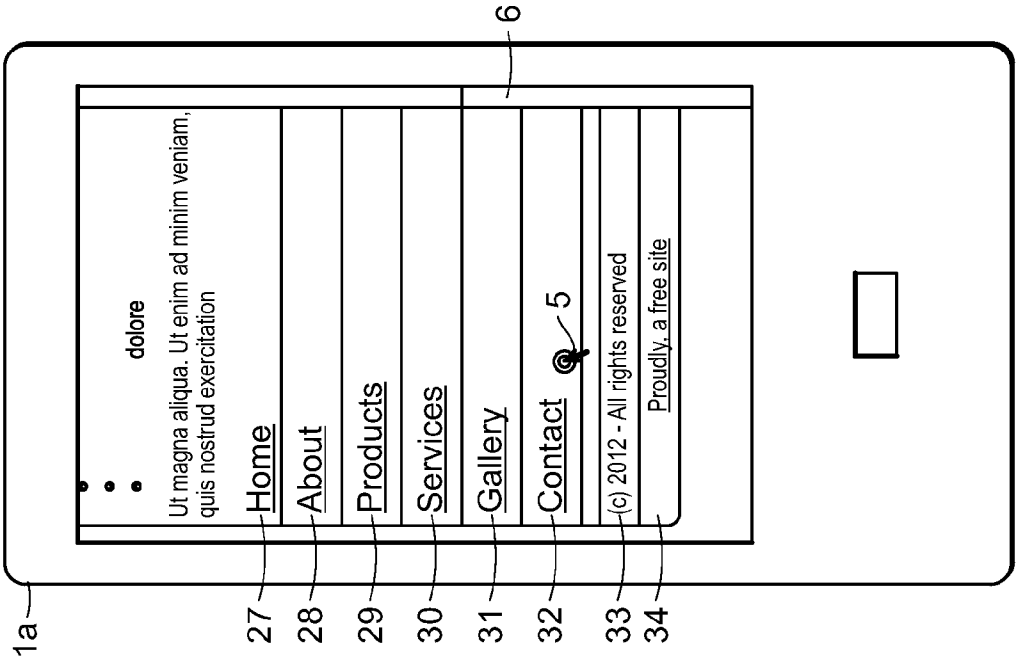
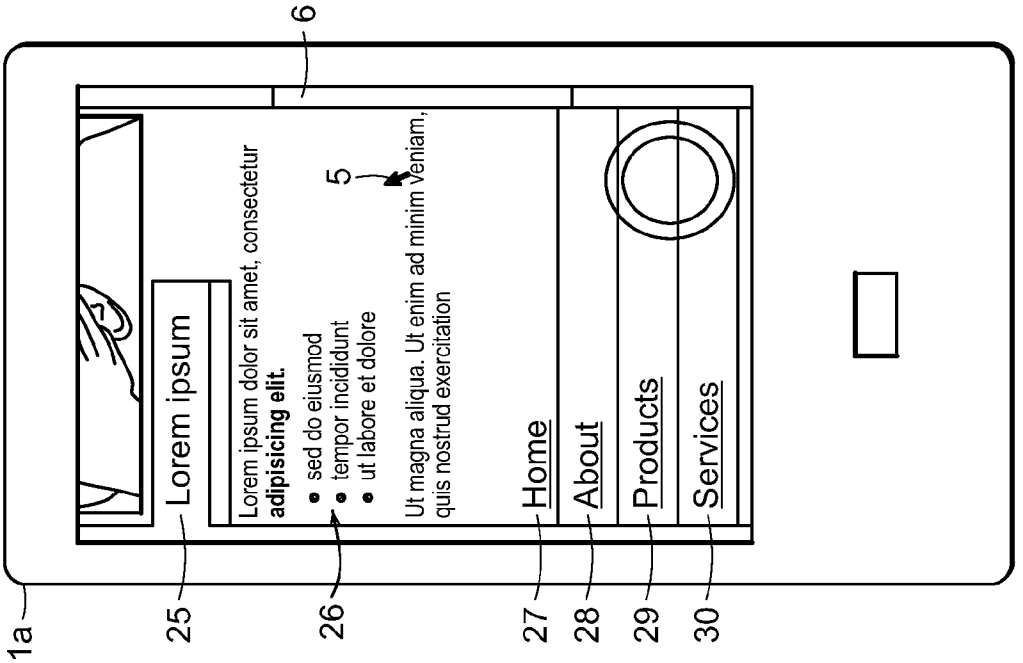

1a
6
dolore
Ut magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation
Home
About
Products
Services
Gallery
Contact
5
(c) 2012 - All rights reserved
Proudly, a free site
27
28
29
30
31
32
33
34

FIG. 8


1a
6
Lorem ipsum
Lorem ipsum dolor sit amet, consectetur adipisicing elit.
sed do eiusmod
tempor incididunt
ut labore et dolore
5
Ut magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation
Home
About
Products
Services
25
26
27
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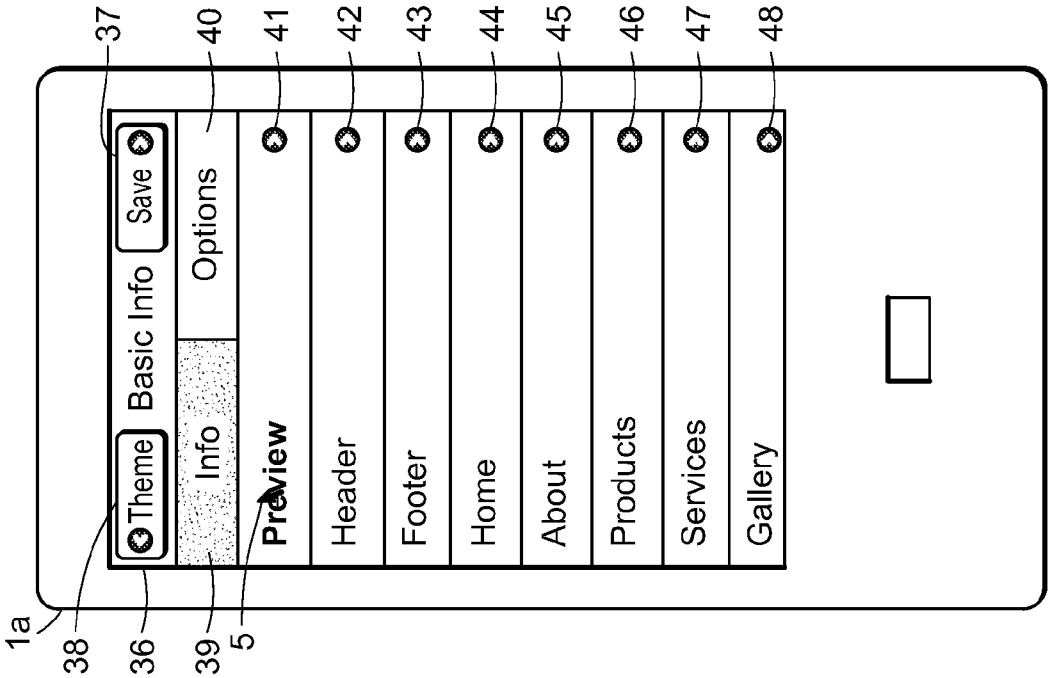
29
30

FIG. 7


1a
38
36
39
5
37
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41
42
43
44
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48
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
About
Products
Services
Gallery

FIG. 10

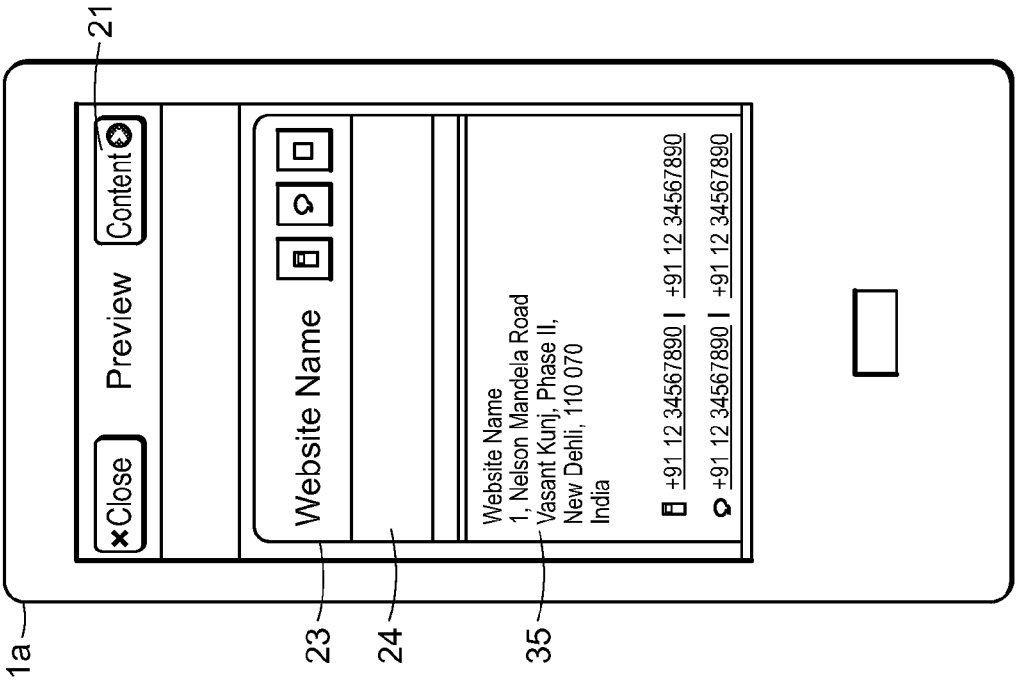

1a
21
23
24
35
Close
Preview
Content
Website Name
Website Name
1, Nelson Mandela Road
Vasant Kunj, Phase II,
New Dehli, 110 070
India
+91 12 34567890 | +91 12 34567890
+91 12 34567890 | +91 12 34567890

FIG. 9

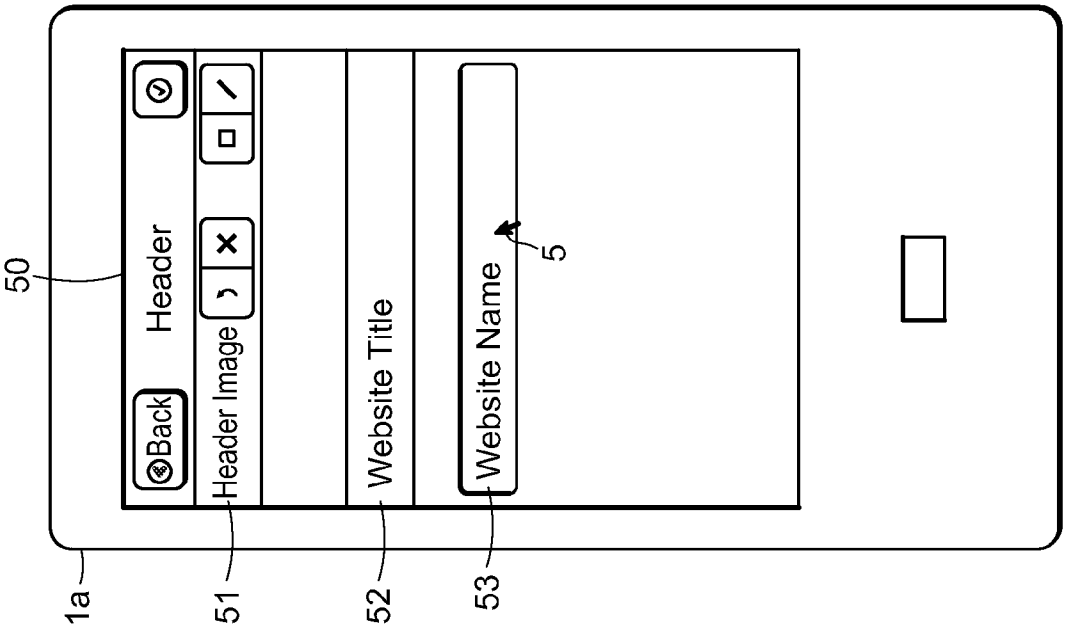
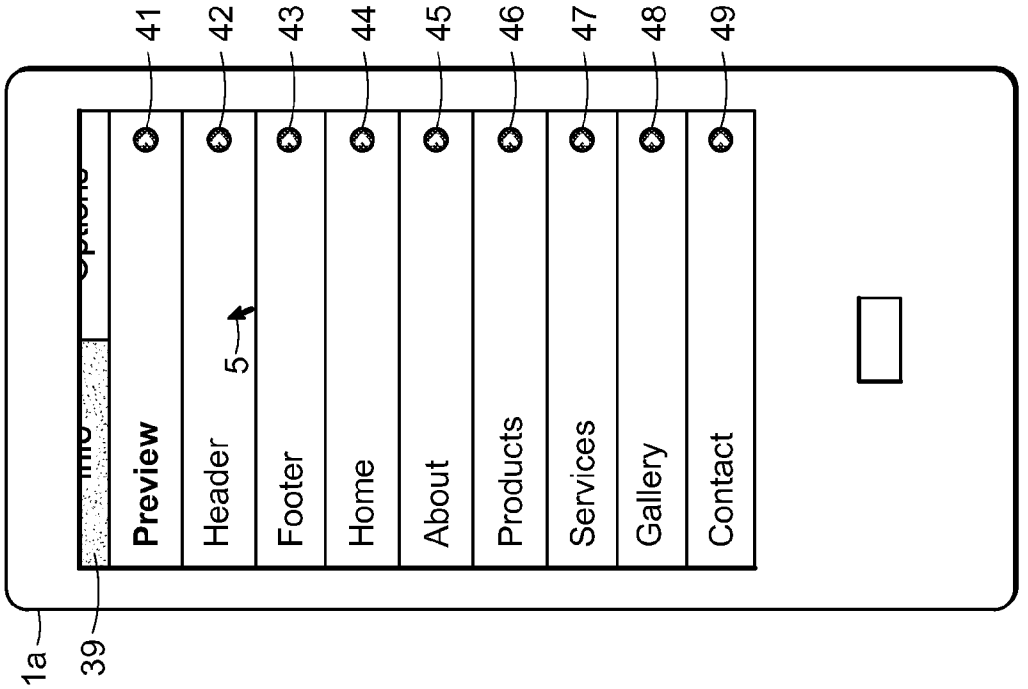

1a
50
Back
Header
Header Image
51
Website Title
52
Website Name
53
5

FIG. 12


1a
39
Preview
Header
5
Footer
Home
About
Products
Services
Gallery
Contact
41
42
43
44
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47
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49

FIG. 11

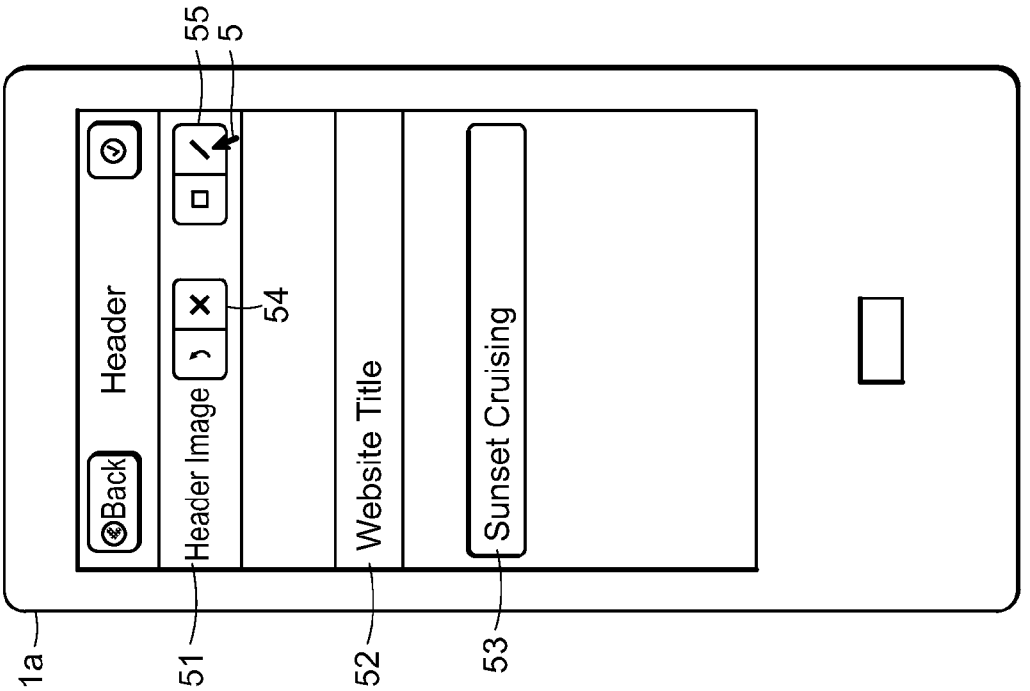
Back
Header
Header Image
Website Title
Sunset Cruising
1a
51
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FIG. 14

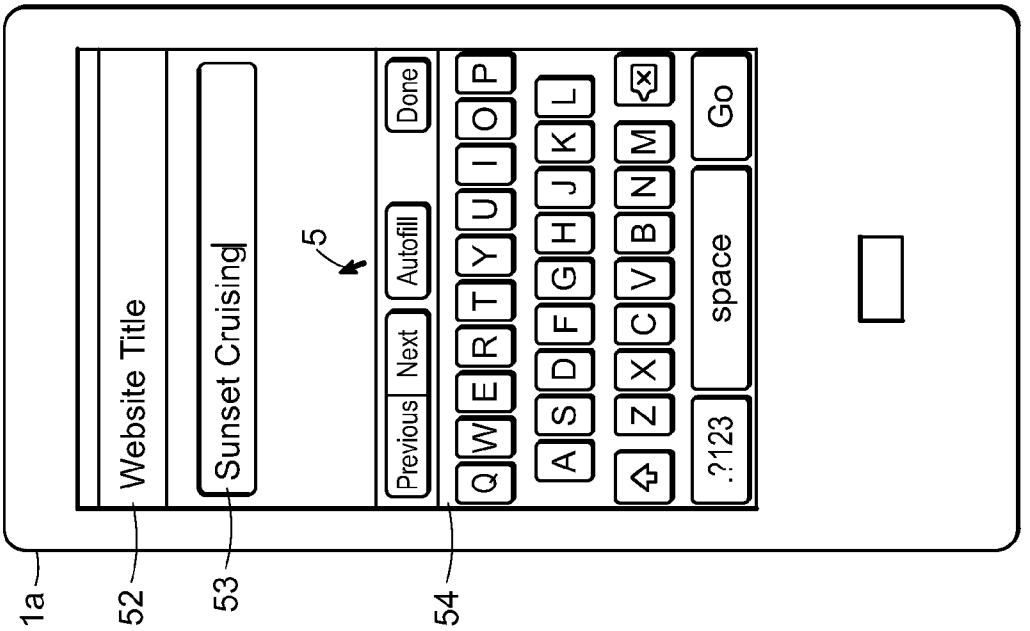

Website Title
Sunset Cruising
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Go
1a
52
53
54
5

FIG. 13

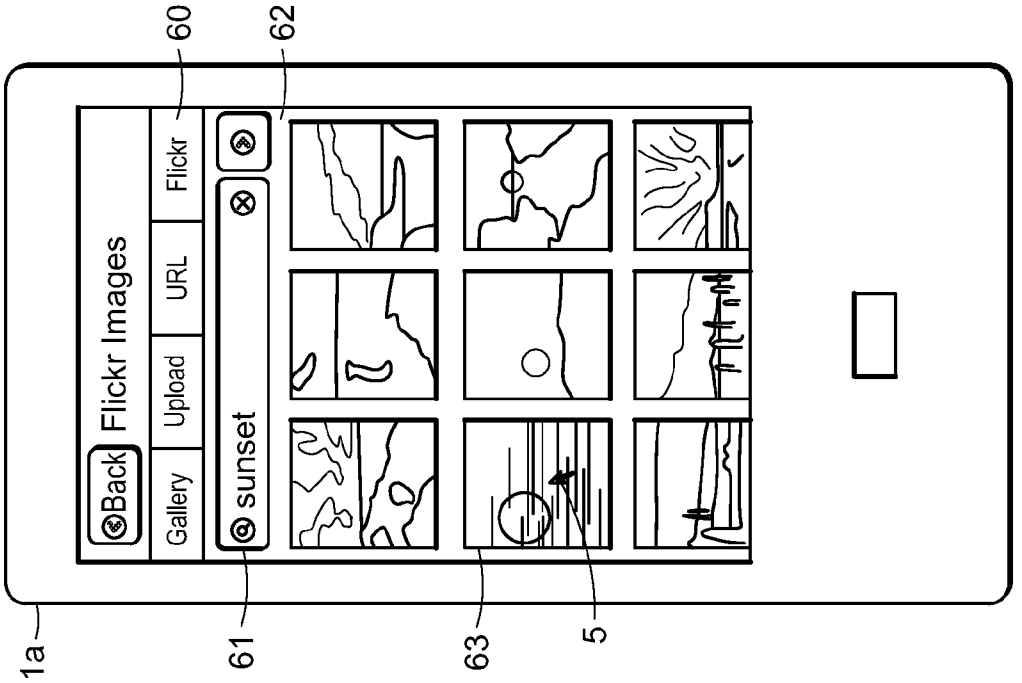

Back
Flickr Images
Gallery
Upload
URL
Flickr
sunset
1a
61
63
5
60
62

FIG. 16

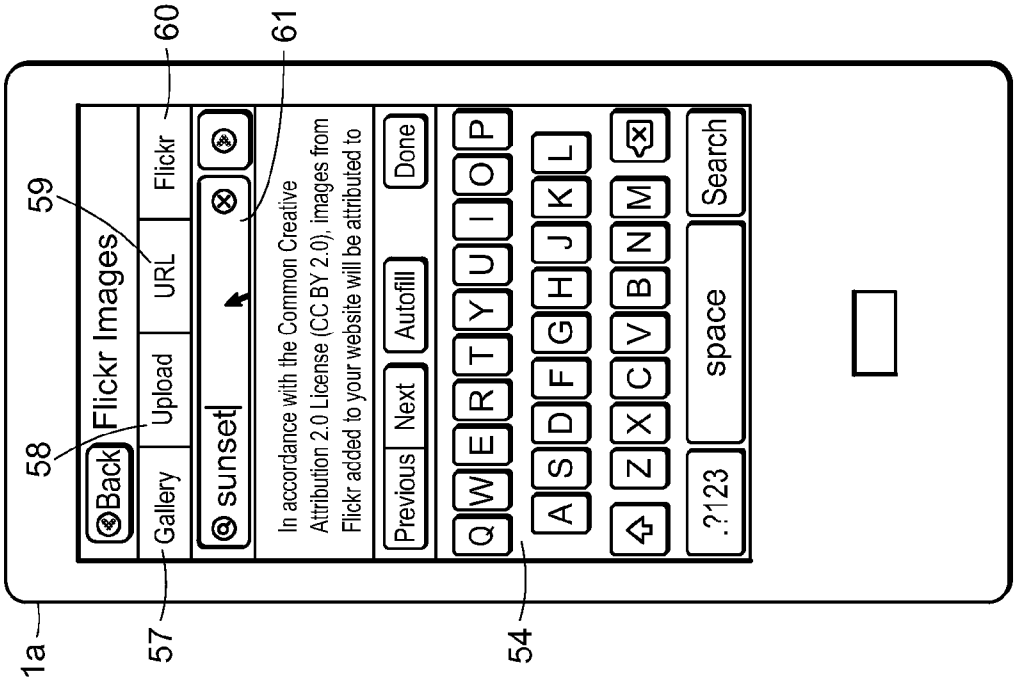

Back
Flickr Images
Gallery
Upload
URL
Flickr
sunset
In accordance with the Common Creative Attribution 2.0 License (CC BY 2.0), images from Flickr added to your website will be attributed to
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Search
1a
57
54
58
59
60
61

FIG. 15

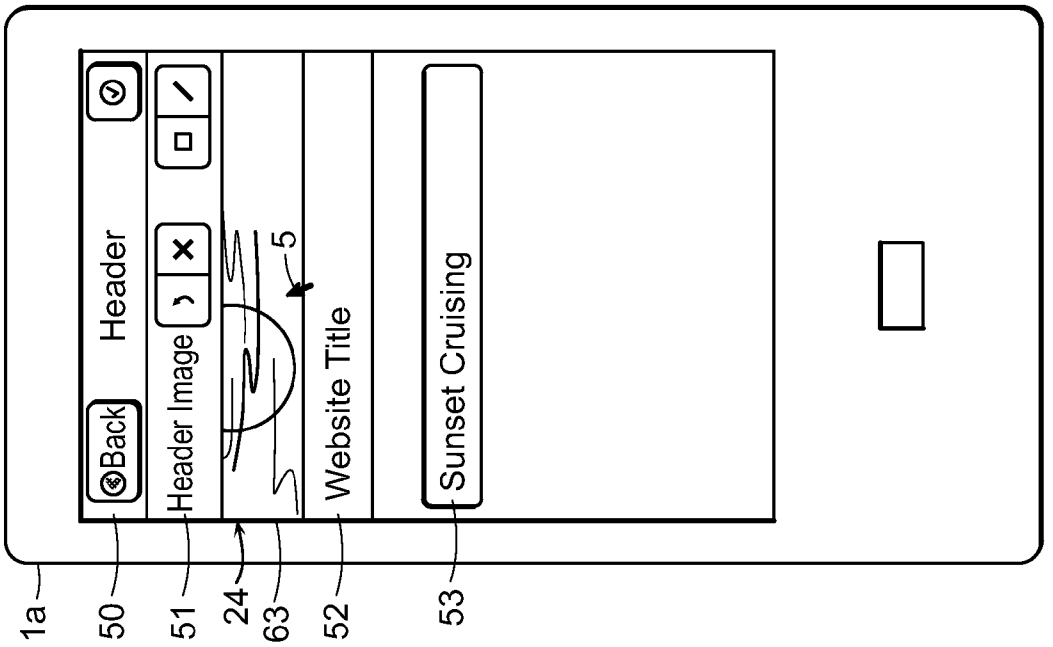

Back
Header
Header Image
Website Title
Sunset Cruising
1a
50
51
24
63
52
53
5

FIG. 18

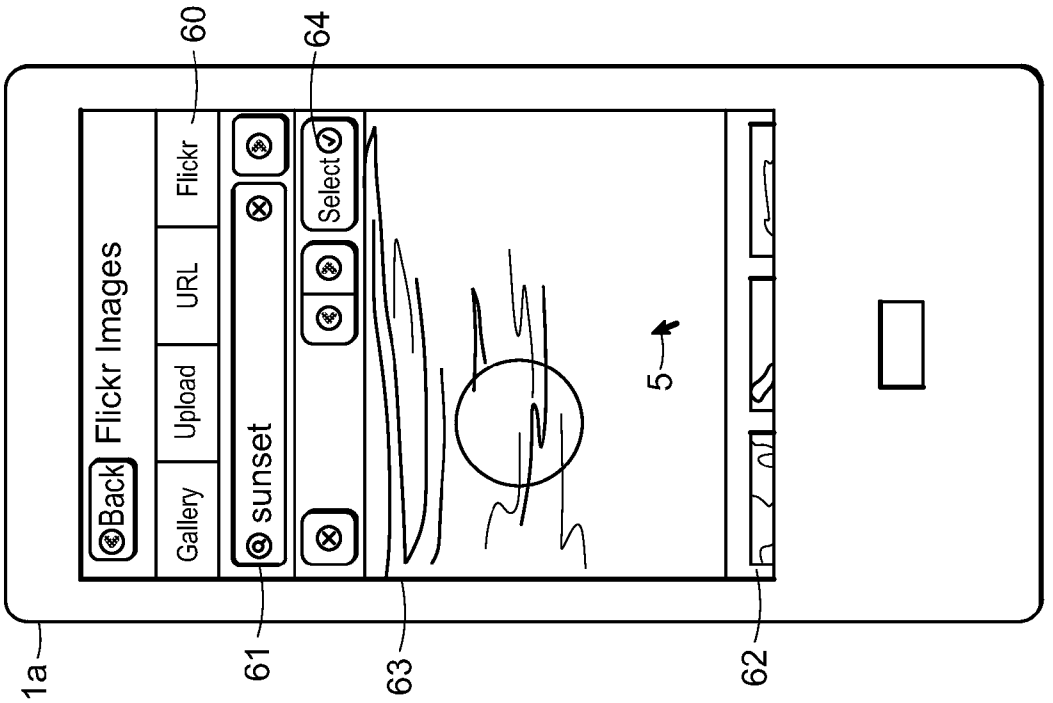

Back
Flickr Images
Gallery
Upload
URL
Flickr
sunset
Select
1a
61
63
62
60
64
5

FIG. 17

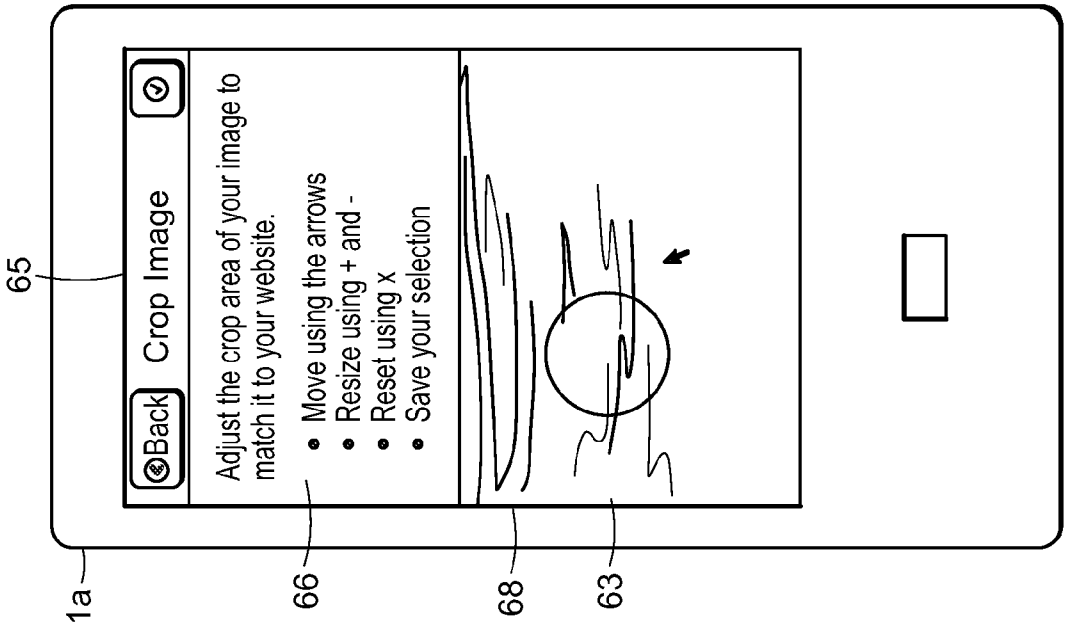

1a
65
Back
Crop Image
Adjust the crop area of your image to match it to your website.
• Move using the arrows
• Resize using + and -
• Reset using x
• Save your selection
66
68
63

FIG. 20

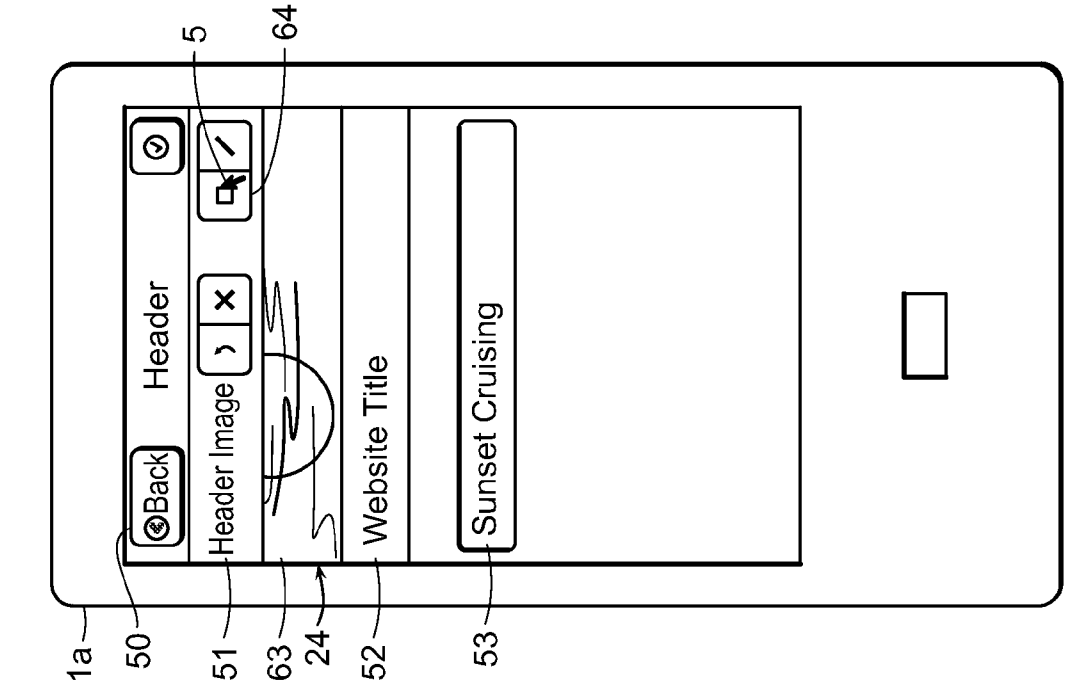

1a
50
Back
Header
Header Image
51
63
24
52
Website Title
53
Sunset Cruising
5
64

FIG. 19

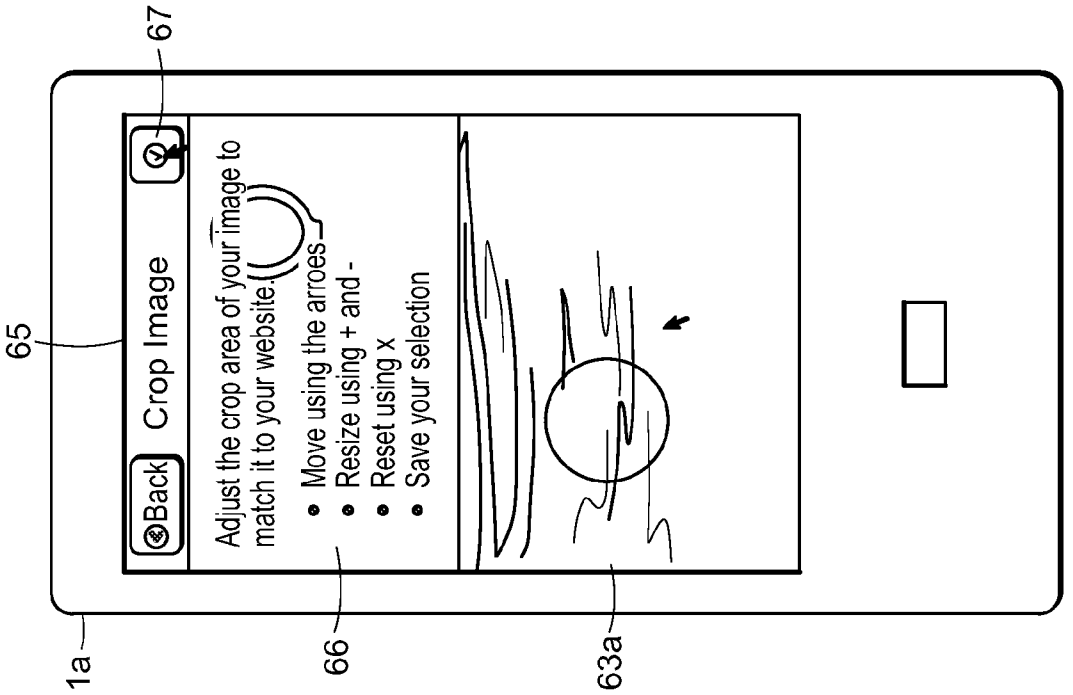

1a
65
67
Back
Crop Image
Adjust the crop area of your image to match it to your website.
• Move using the arroes
• Resize using + and -
• Reset using x
• Save your selection
66
63a

FIG. 22

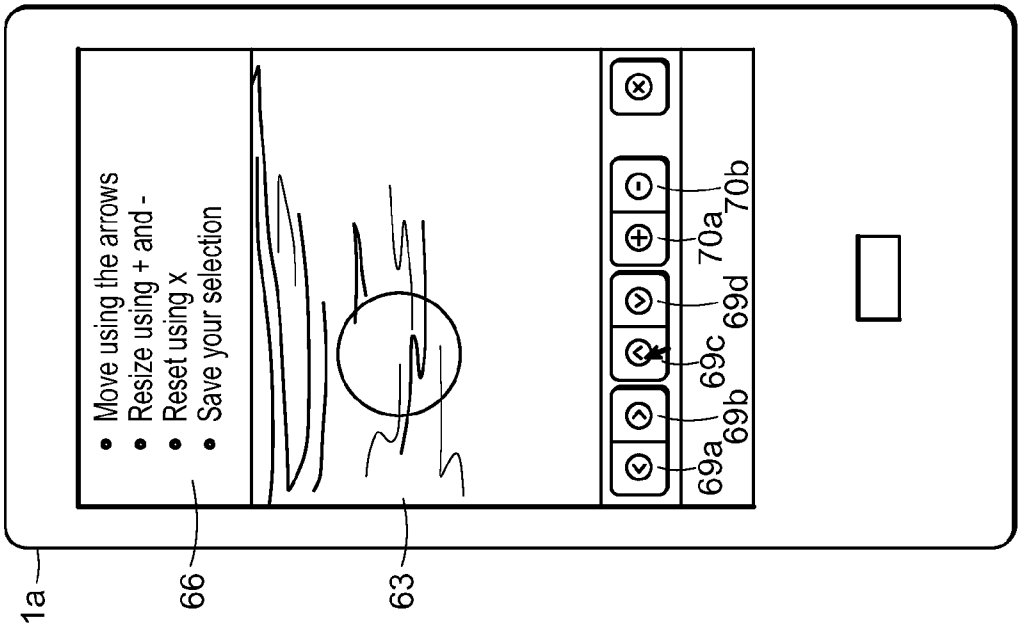

1a
• Move using the arrows
• Resize using + and -
• Reset using x
• Save your selection
66
63
69a
69b
69c
69d
70a
70b

FIG. 21

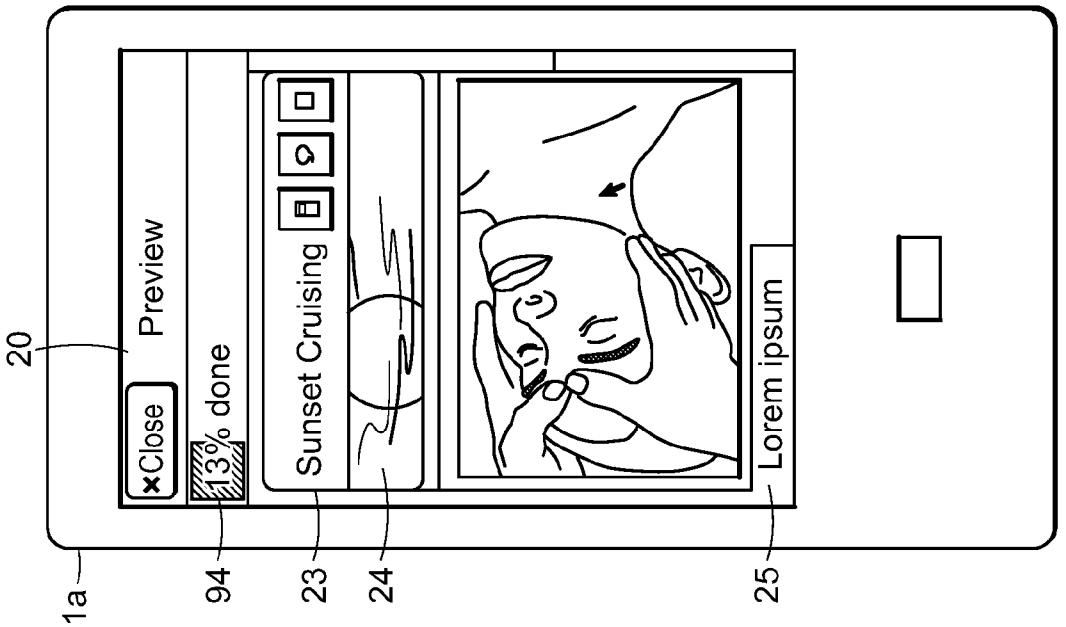

Close
Preview
13% done
Sunset Cruising
Lorem ipsum
20
1a
94
23
24
25

FIG. 24

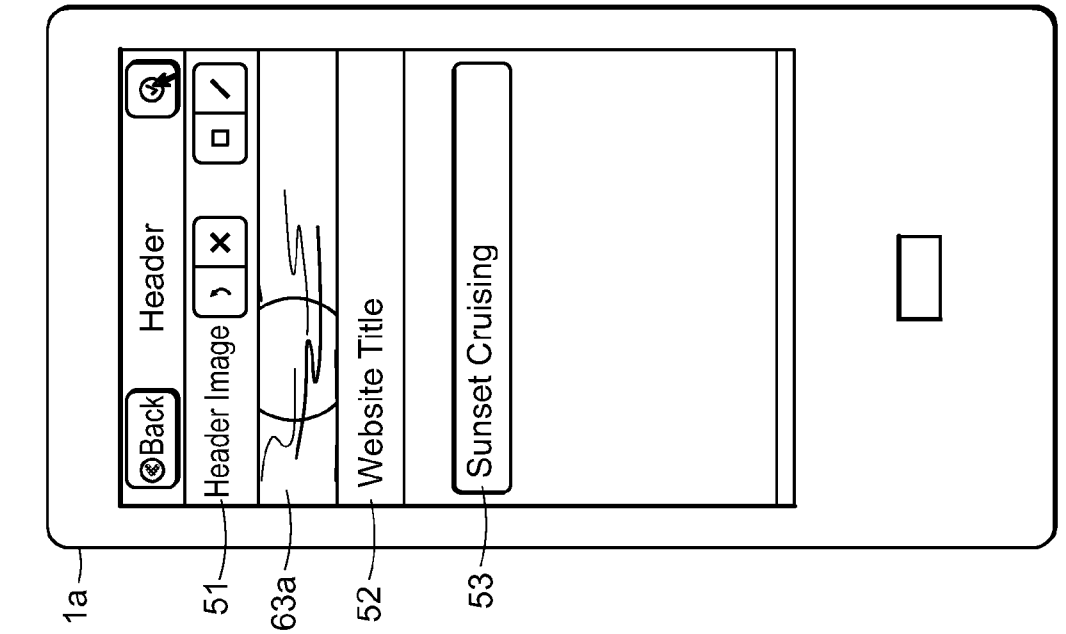

Back
Header
Header Image
Website Title
Sunset Cruising
1a
51
63a
52
53

FIG. 23

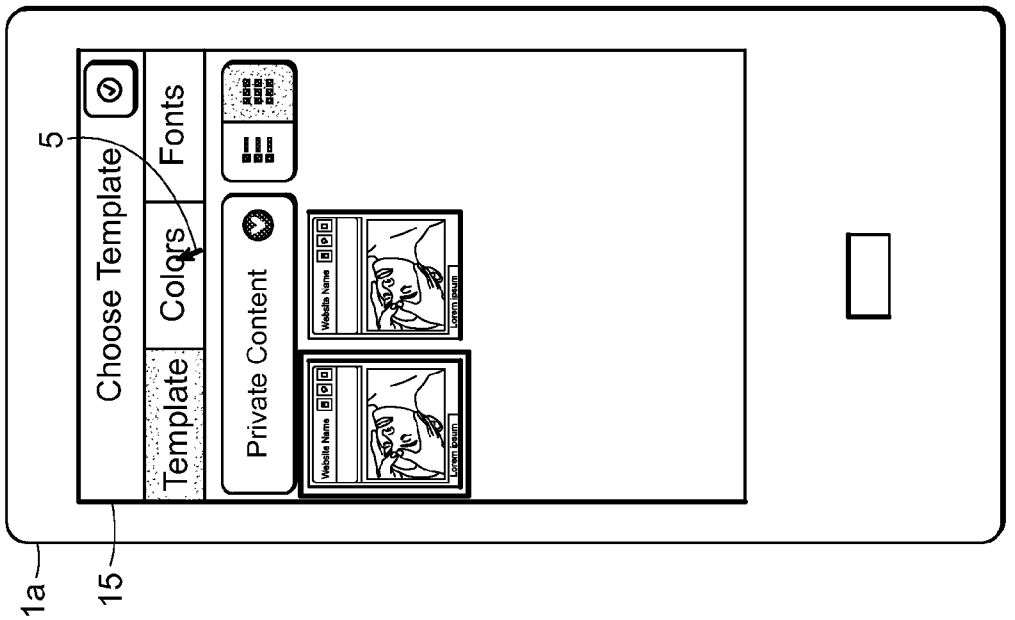
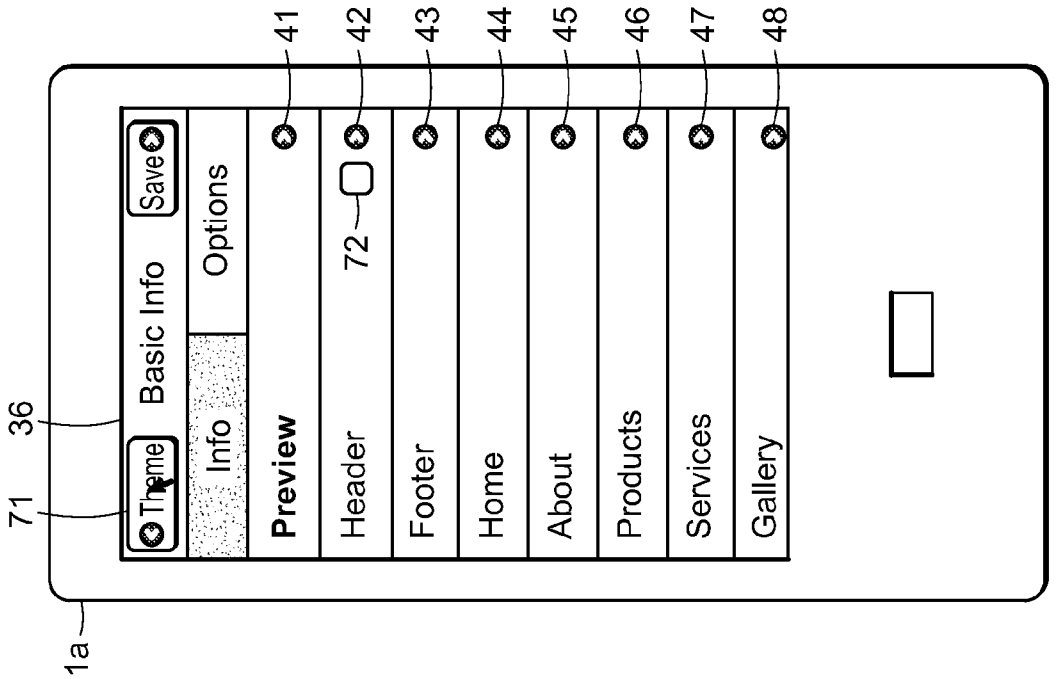

1a
15
Choose Template
5
Template
Colors
Fonts
Private Content
Website Name
Website Name

FIG. 26


1a
71
36
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
About
Products
Services
Gallery
72
41
42
43
44
45
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47
48

FIG. 25

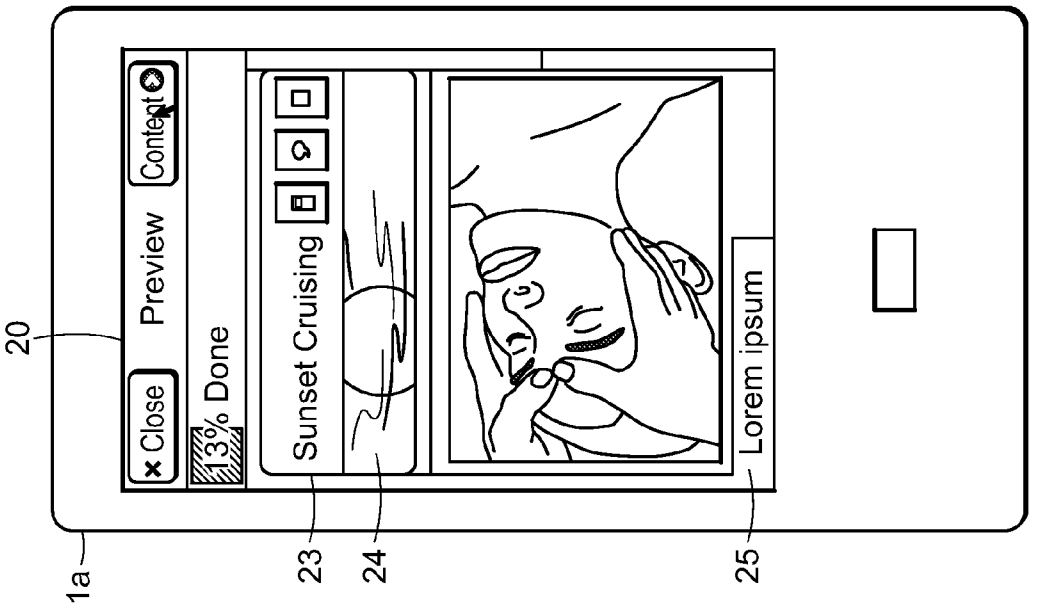
1a
20
× Close
Preview
Content
13% Done
Sunset Cruising
23
24
Lorem ipsum
25

FIG. 28

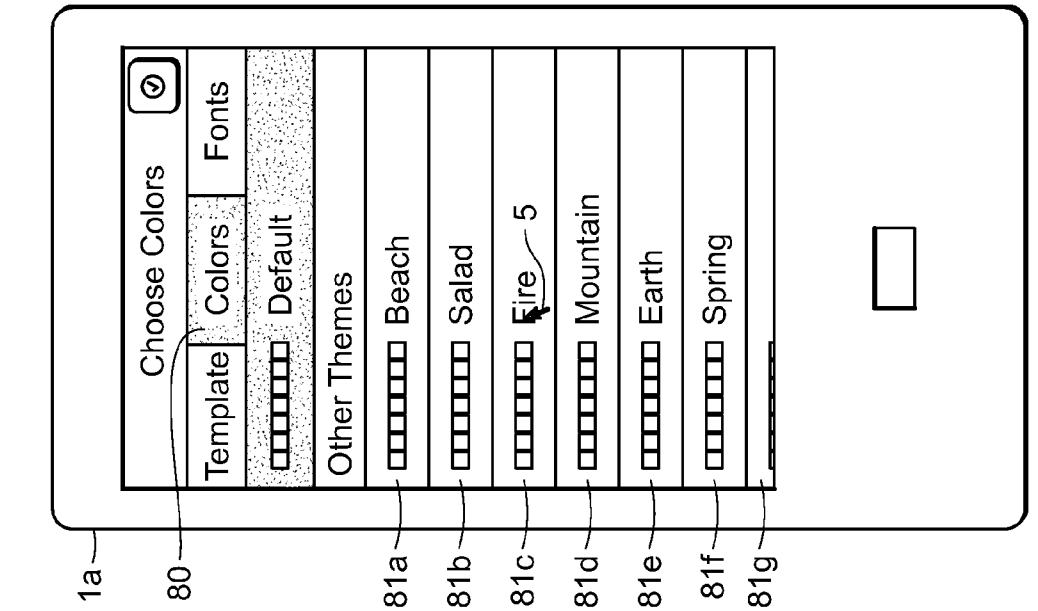
1a
80
Choose Colors
Template
Colors
Fonts
Default
Other Themes
Beach
Salad
Fire
5
Mountain
Earth
Spring
81a
81b
81c
81d
81e
81f
81g

FIG. 27

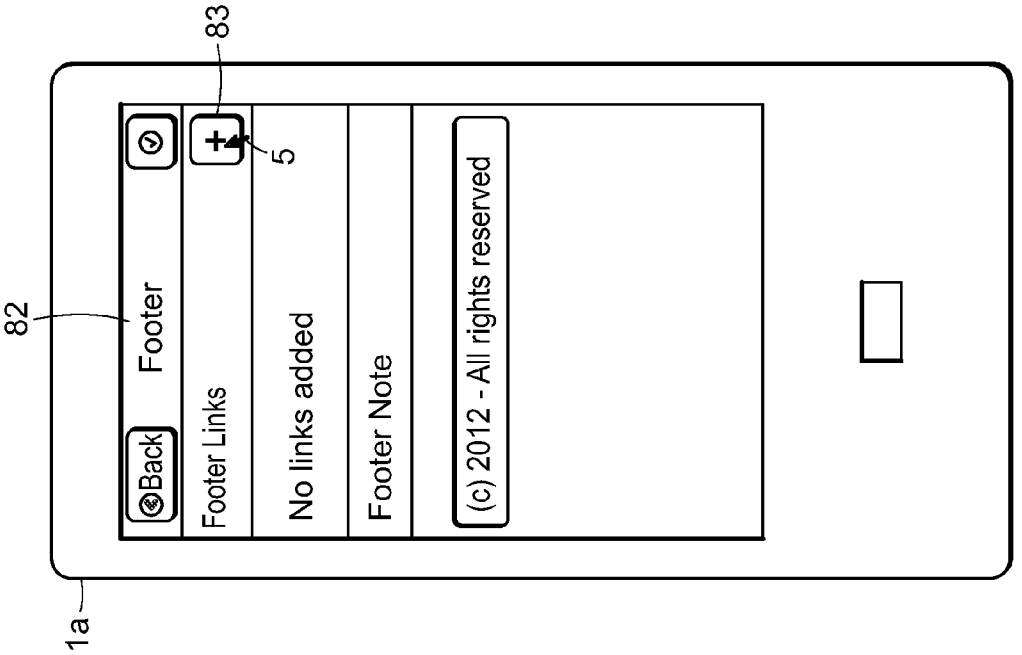
1a
82
83
Back
Footer
Footer Links
5
No links added
Footer Note
(c) 2012 - All rights reserved

FIG. 30

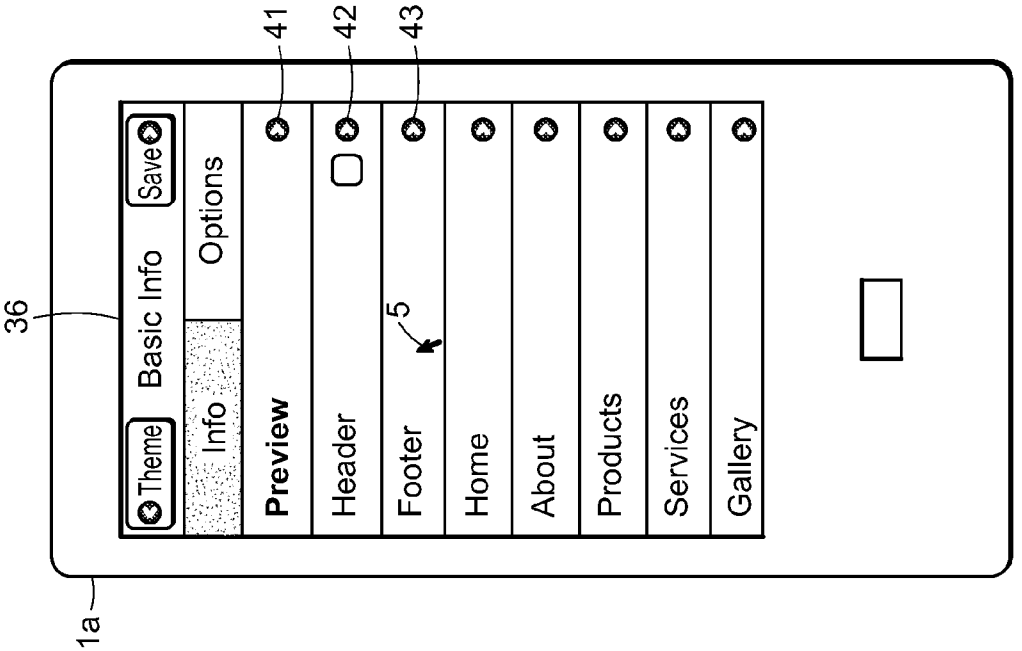
1a
36
41
42
43
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
5
Home
About
Products
Services
Gallery

FIG. 29

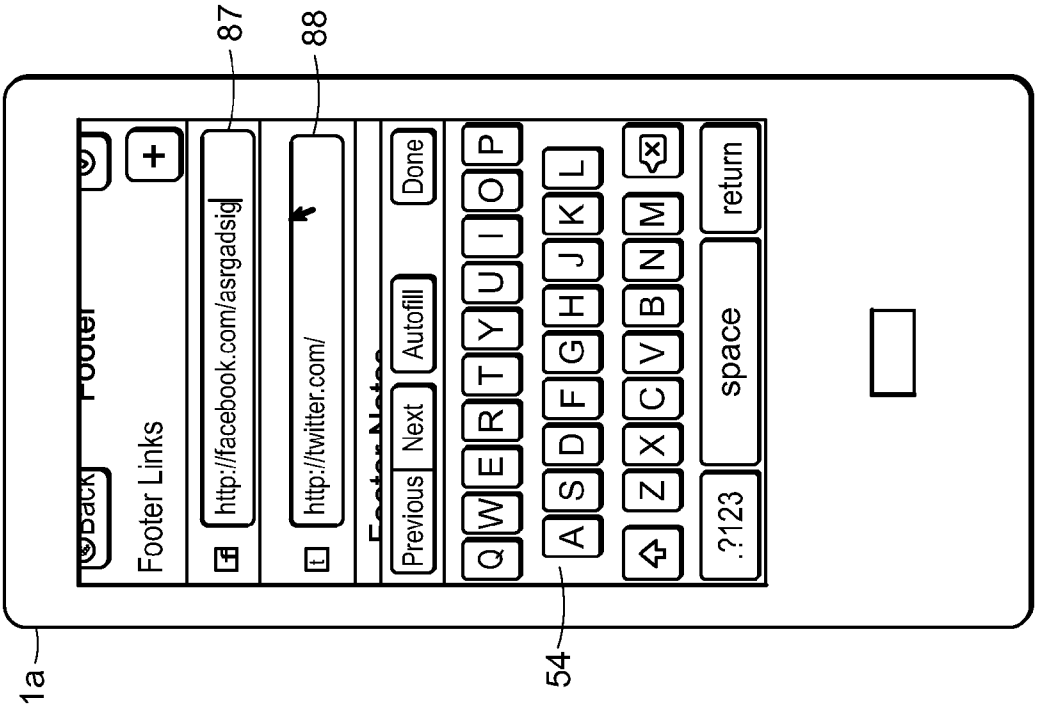
1a
Back
Footer
Footer Links
http://facebook.com/asrgadsig
http://twitter.com/
Footer Note
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
54
87
88

FIG. 32

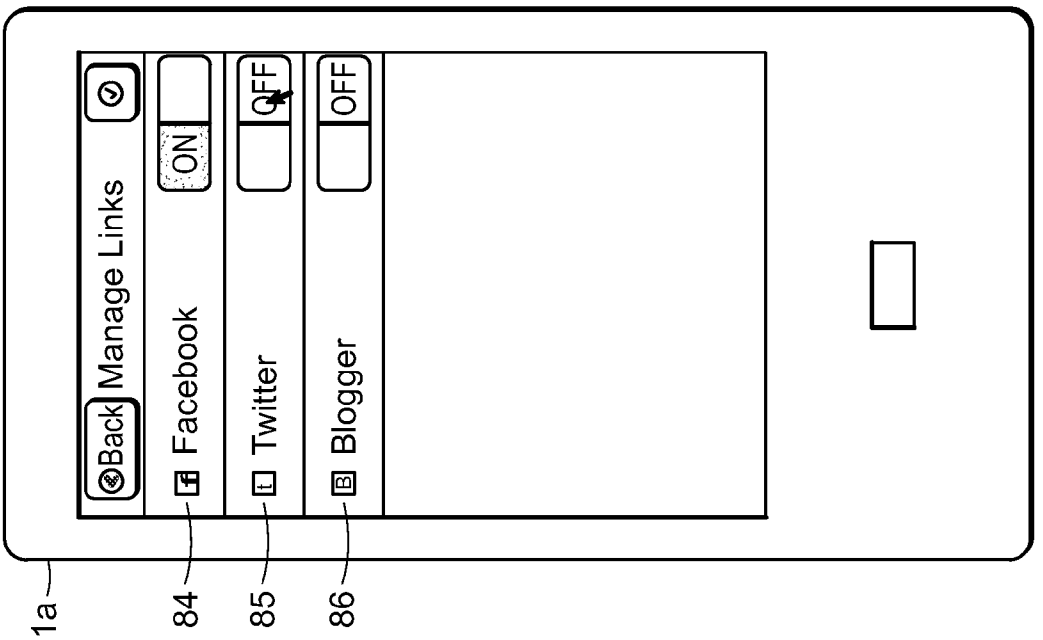
1a
Back
Manage Links
Facebook
ON
Twitter
OFF
Blogger
OFF
84
85
86

FIG. 31

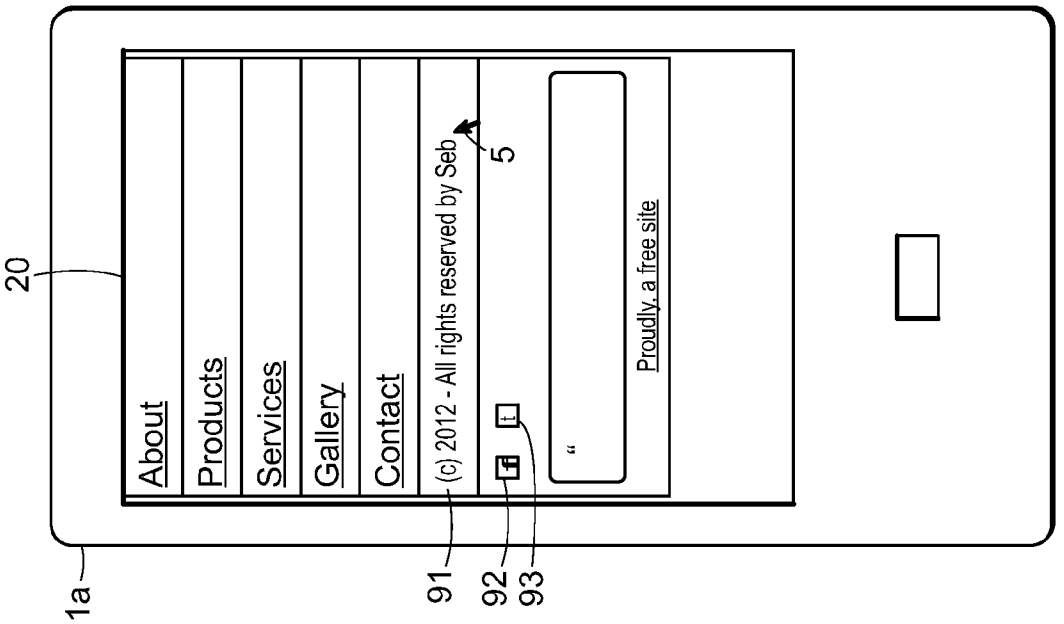
20
About
Products
Services
Gallery
Contact
(c) 2012 - All rights reserved by Seb
5
Proudly, a free site
1a
91
92
93

FIG. 34

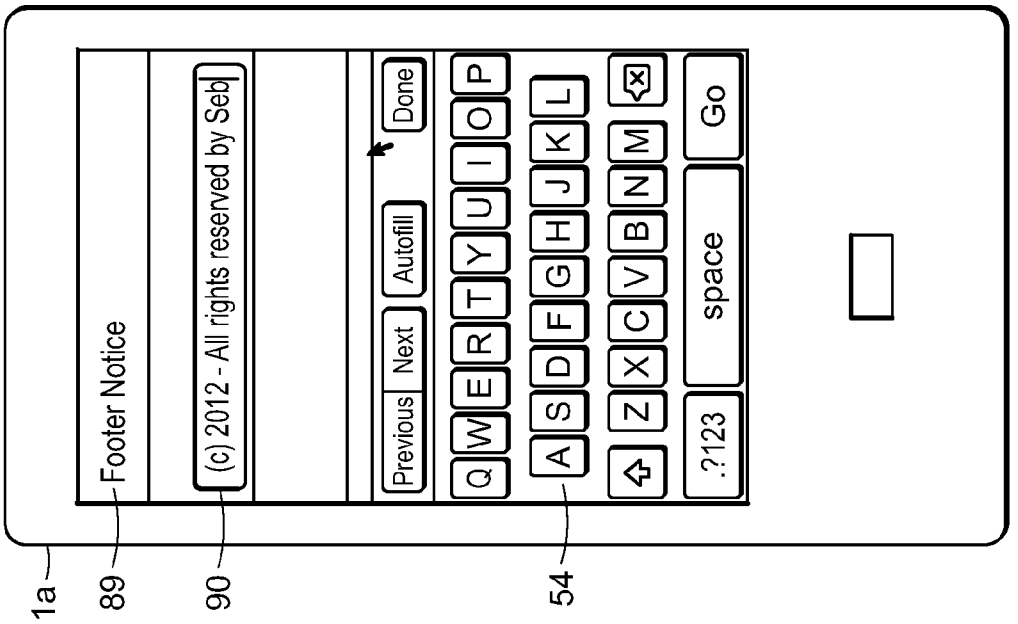
Footer Notice
(c) 2012 - All rights reserved by Seb
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Go
1a
89
90
54

FIG. 33

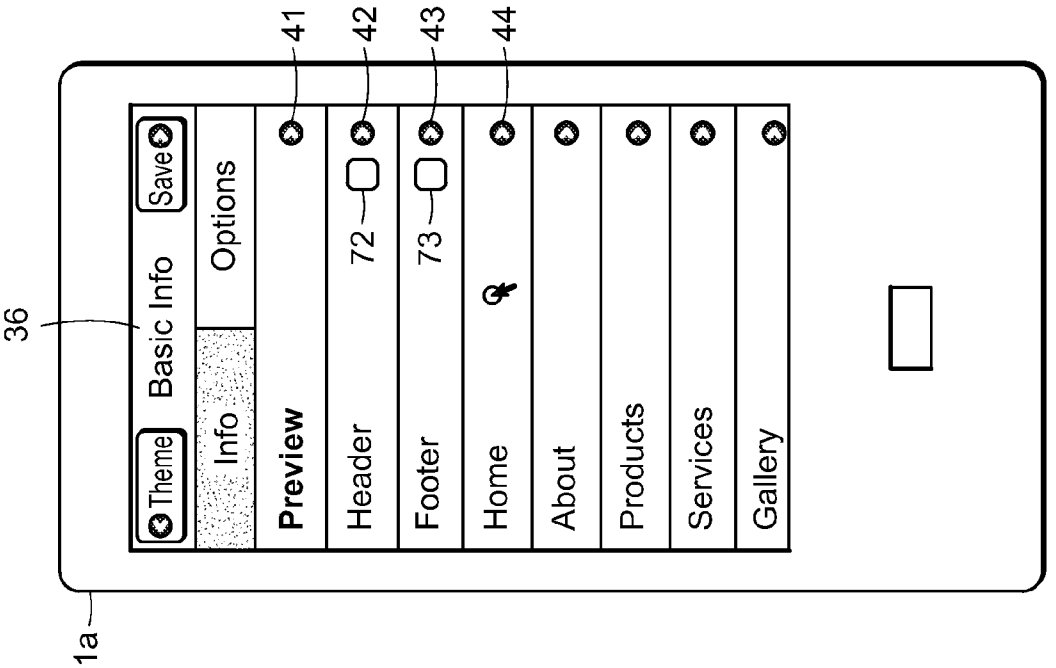
36
1a
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
About
Products
Services
Gallery
41
42
43
44
72
73

FIG. 36

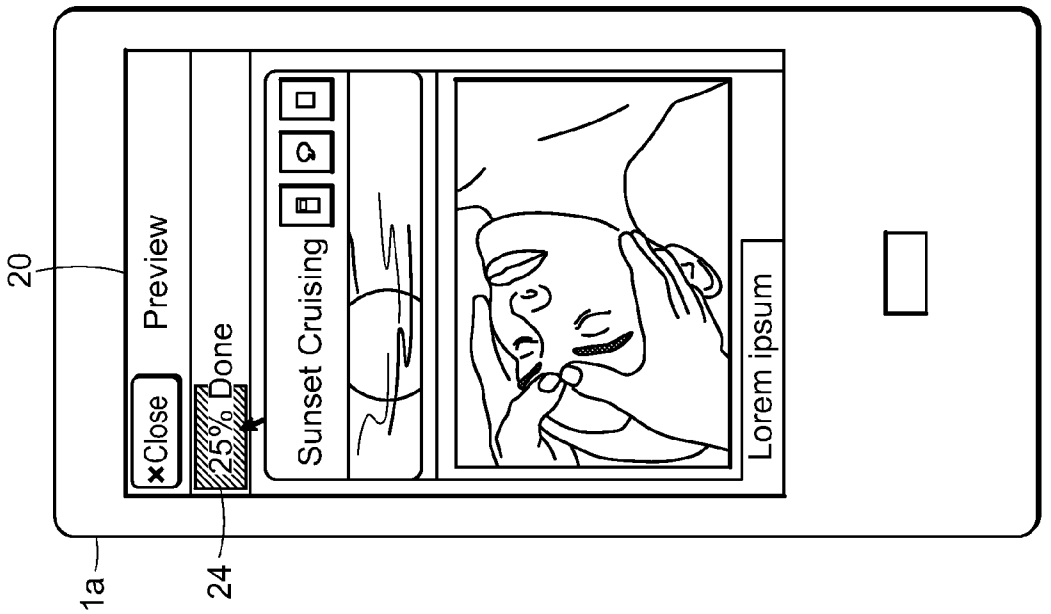
20
1a
24
Close
Preview
25%
Done
Sunset Cruising
Lorem ipsum

FIG. 35

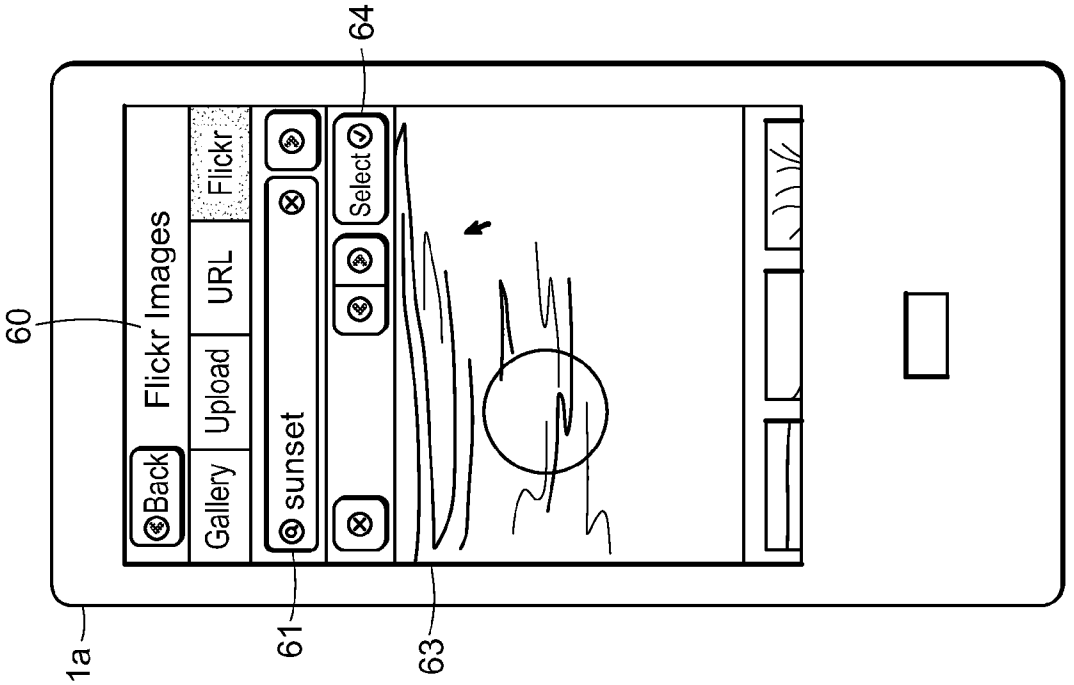
Back
Flickr Images
Gallery
Upload
URL
Flickr
sunset
Select
1a
60
61
63
64

FIG. 38

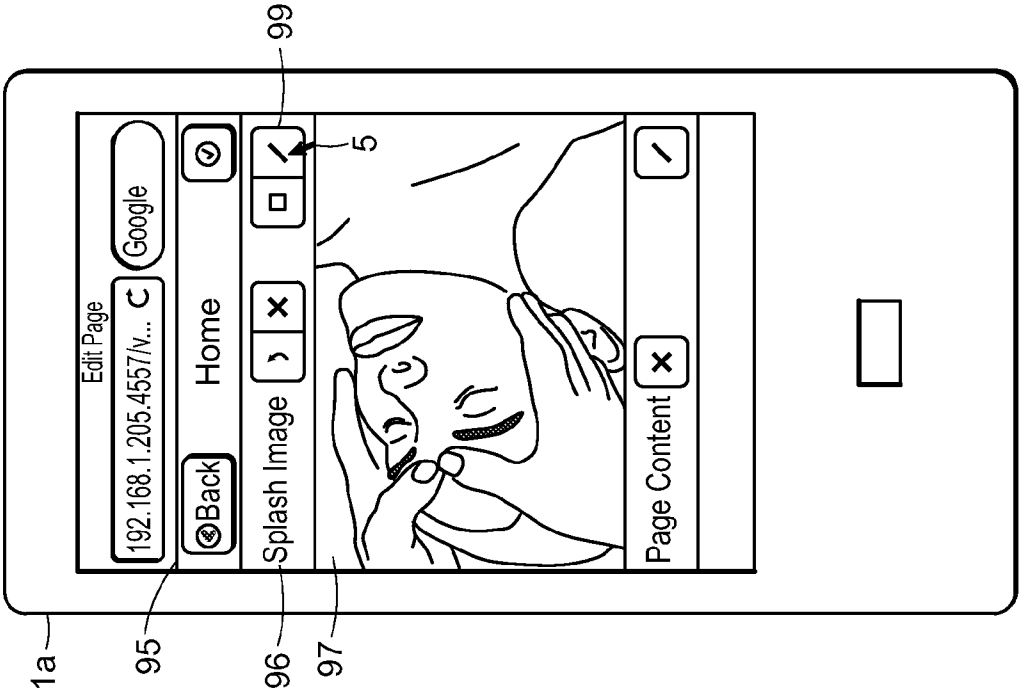
Edit Page
192.168.1.205.4557/v...
Google
Back
Home
Splash Image
Page Content
1a
95
96
97
99
5

FIG. 37

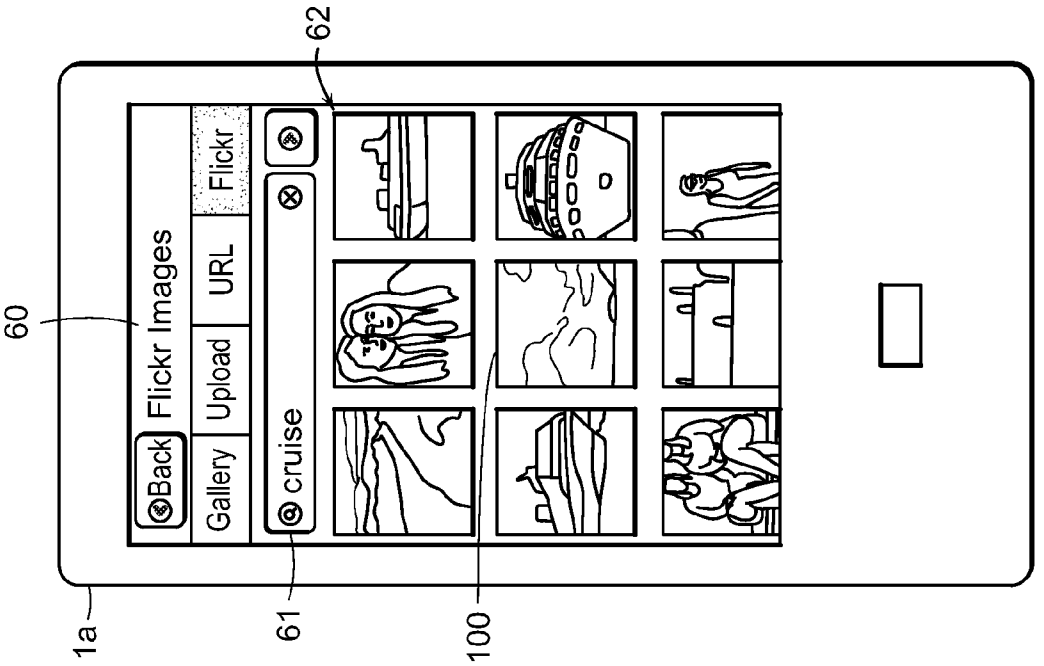
60
Back
Flickr Images
Gallery
Upload
URL
Flickr
cruise
62
61
100
1a

FIG. 40

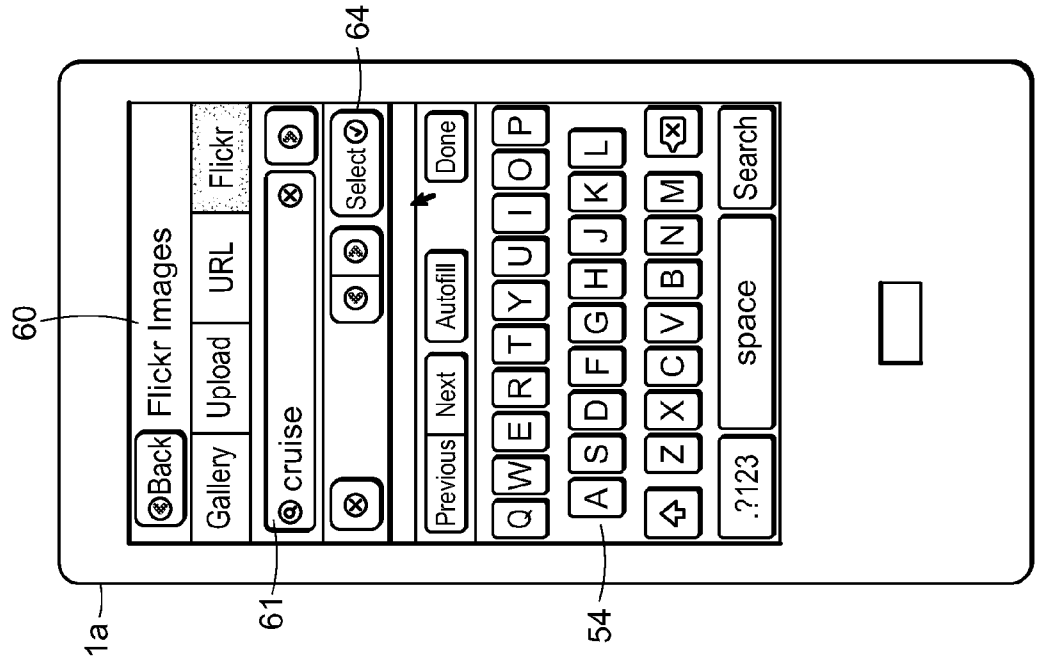
60
Back
Flickr Images
Gallery
Upload
URL
Flickr
cruise
64
Select
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Search
61
54
1a

FIG. 39

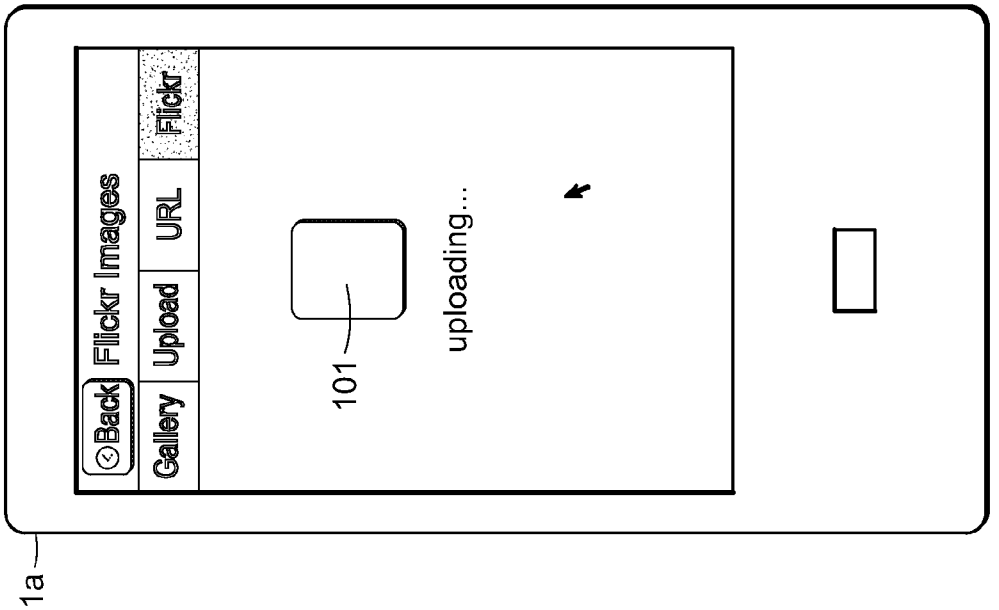
1a
Back
Flickr Images
Gallery
Upload
URL
Flickr
101
uploading...

FIG. 42

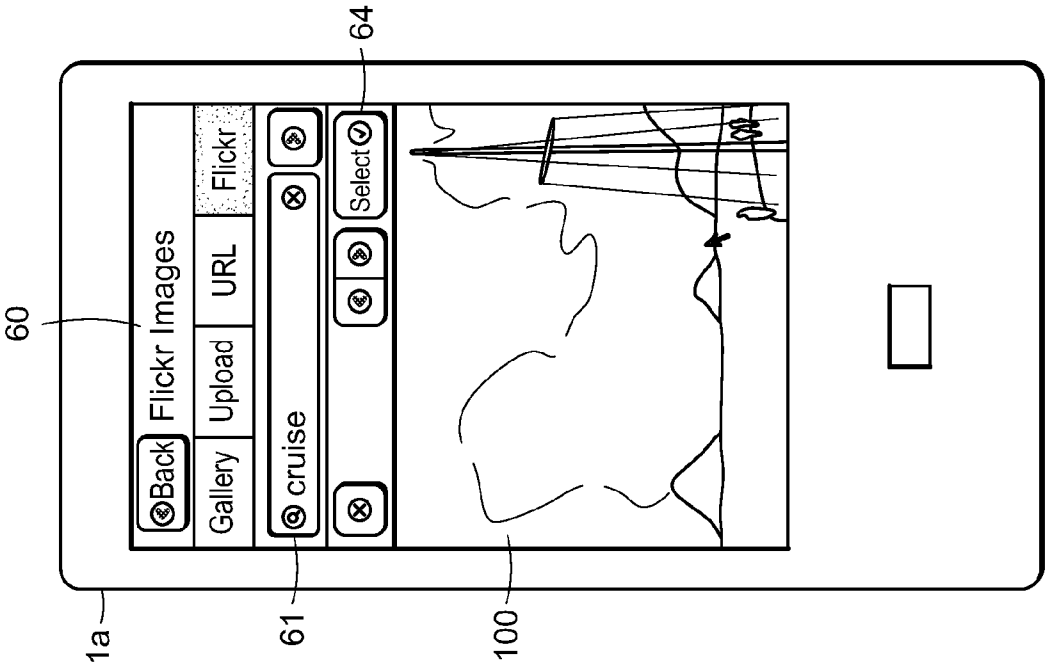
60
1a
Back
Flickr Images
Gallery
Upload
URL
Flickr
cruise
61
64
Select
100

FIG. 41

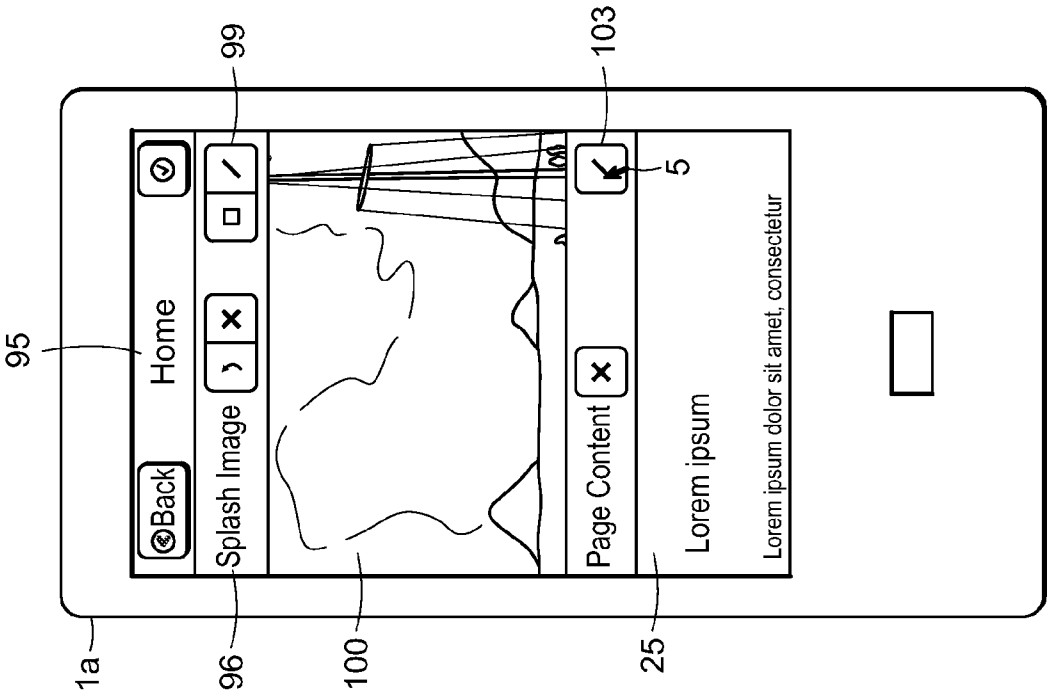
95
Back
Home
Splash Image
99
96
100
Page Content
103
5
Lorem ipsum
Lorem ipsum dolor sit amet, consectetur
25
1a

FIG. 44

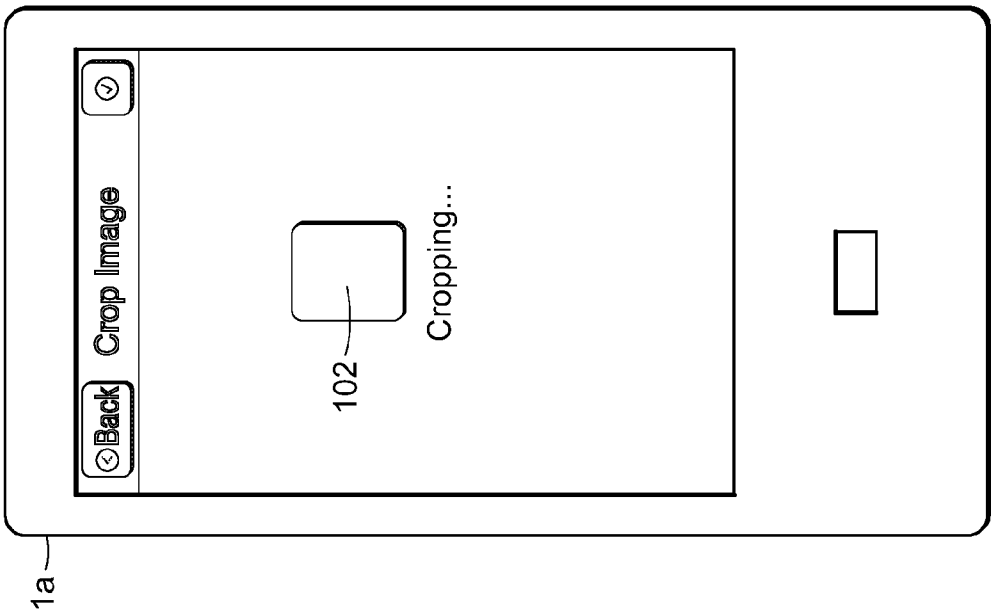
Back
Crop Image
102
Cropping...
1a

FIG. 43

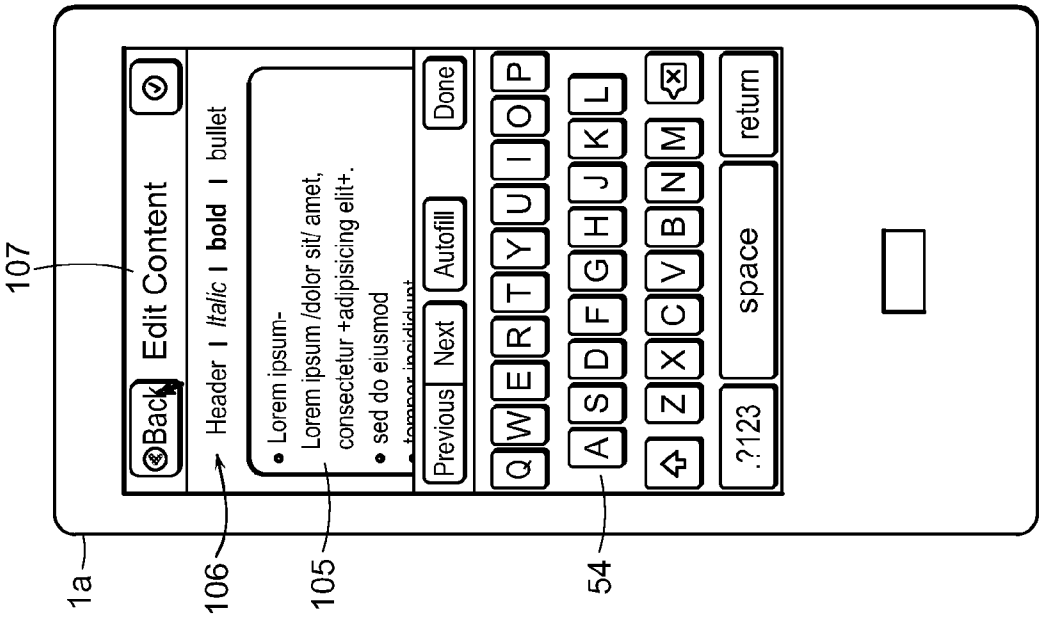
107
Back
Edit Content
Header I *Italic* I **bold** I bullet
• Lorem ipsum-
Lorem ipsum /dolor sit/ amet,
consectetur +adipisicing elit+.
• sed do eiusmod
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
return
1a
106
105
54

FIG. 46

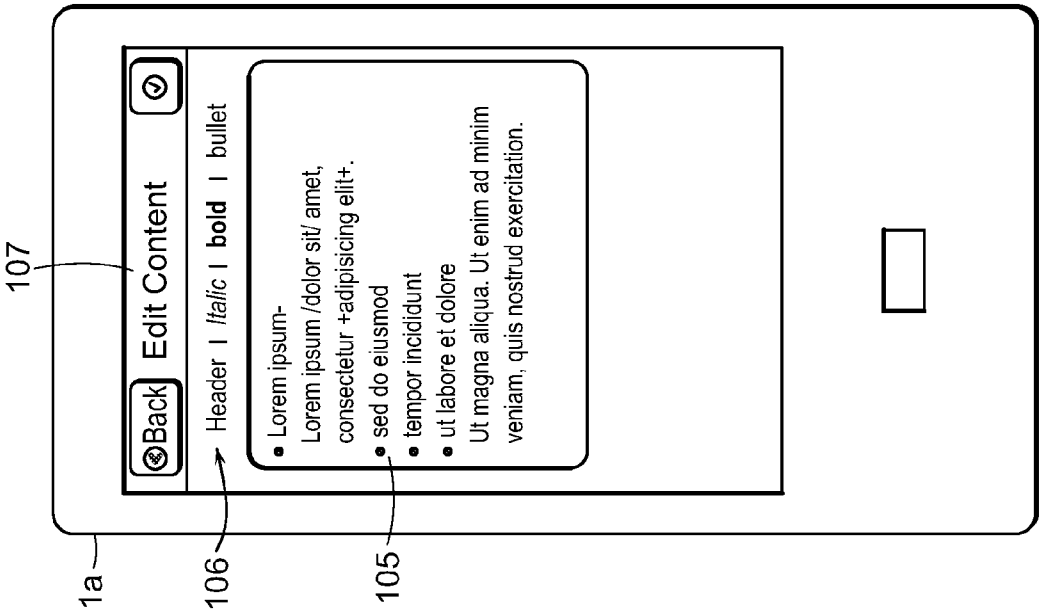
107
Back
Edit Content
Header I *Italic* I **bold** I bullet
• Lorem ipsum-
Lorem ipsum /dolor sit/ amet,
consectetur +adipisicing elit+.
• sed do eiusmod
• tempor incididunt
• ut labore et dolore
Ut magna aliqua. Ut enim ad minim
veniam, quis nostrud exercitation.
1a
106
105

FIG. 45

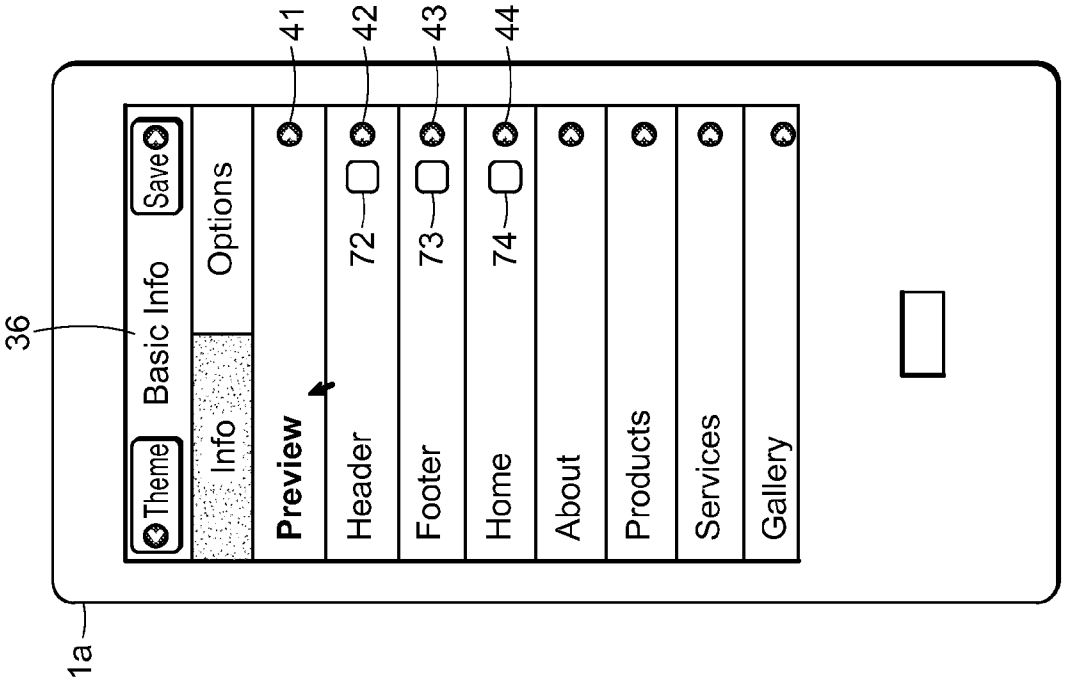
1a
36
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
About
Products
Services
Gallery
41
42
43
44
72
73
74

FIG. 48

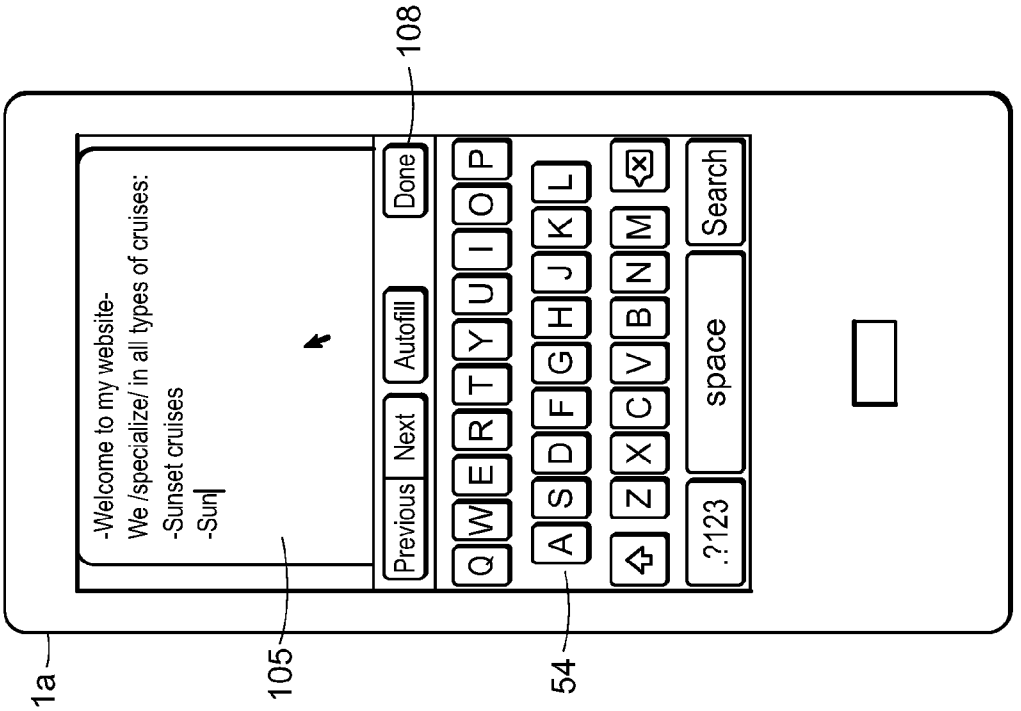
1a
105
54
108
-Welcome to my website-
We /specialize/ in all types of cruises:
-Sunset cruises
-Sun
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Search

FIG. 47

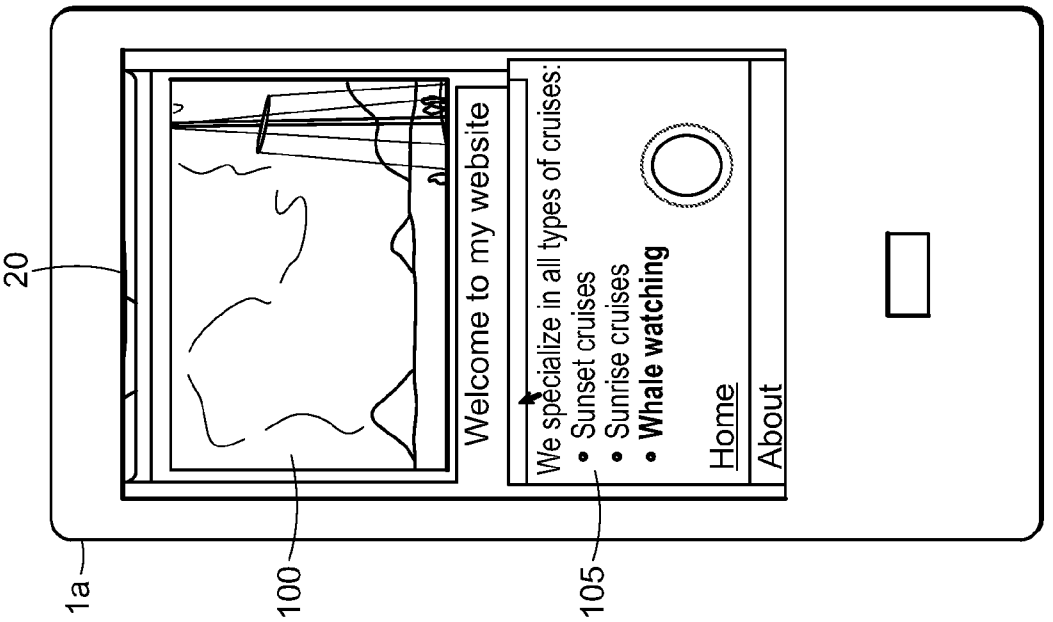
20
1a
100
105
Welcome to my website
We specialize in all types of cruises:
• Sunset cruises
• Sunrise cruises
• Whale watching
Home
About

FIG. 50

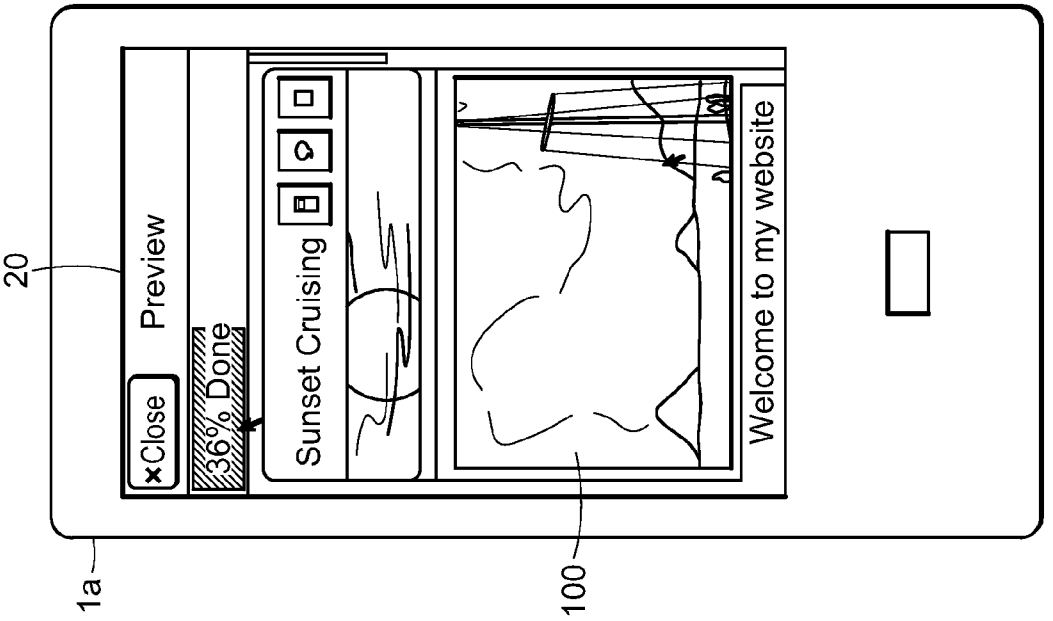
20
1a
100
Close
Preview
36% Done
Sunset Cruising
Welcome to my website

FIG. 49

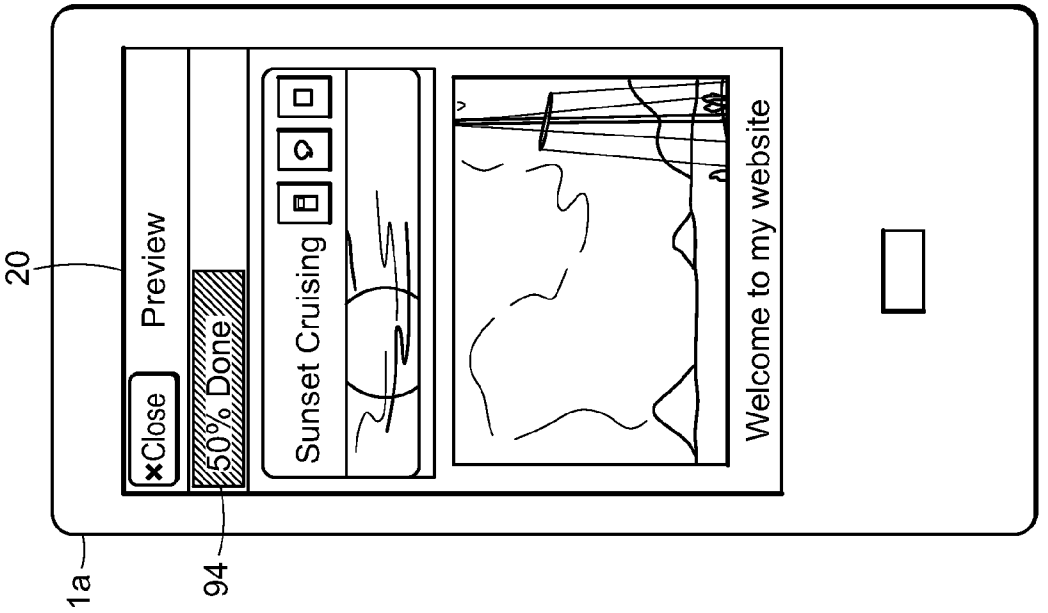
20
Close
Preview
50% Done
Sunset Cruising
Welcome to my website
1a
94

FIG. 52

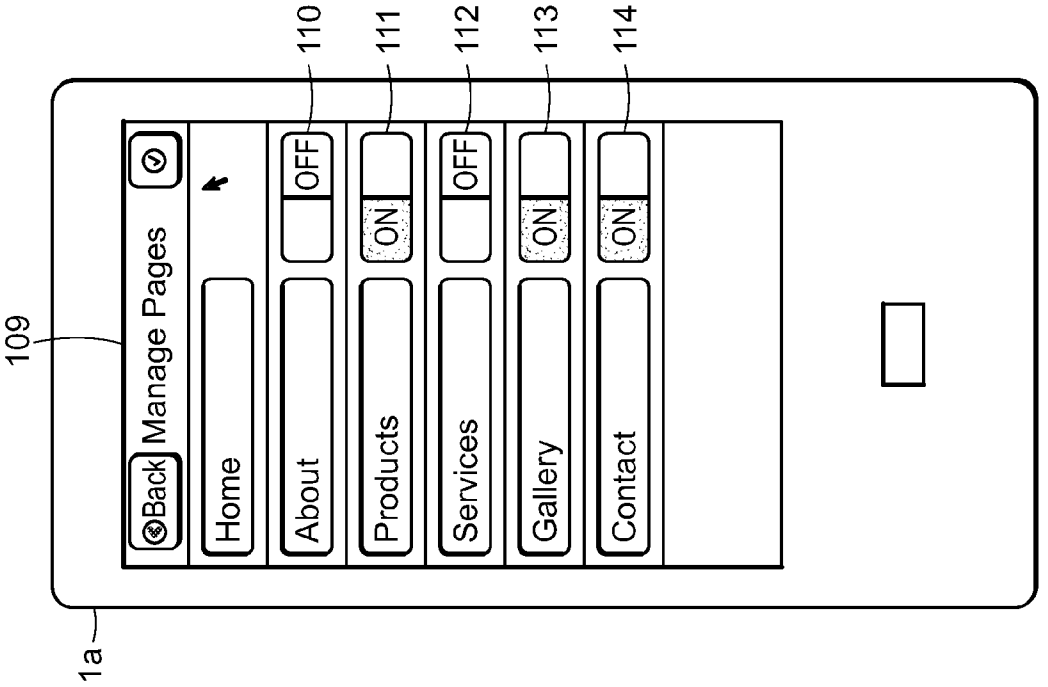
109
Back
Manage Pages
Home
About
OFF
Products
ON
Services
OFF
Gallery
ON
Contact
ON
110
111
112
113
114
1a

FIG. 51

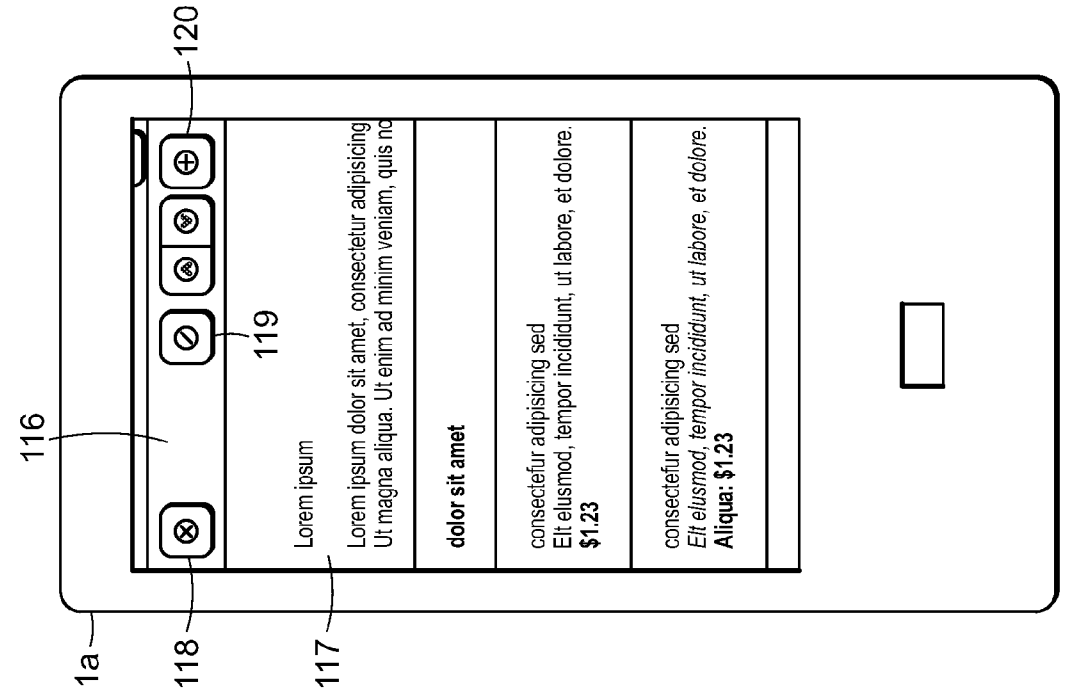
1a
118
117
116
119
120
Lorem ipsum
Lorem ipsum dolor sit amet, consectetur adipisicing
Ut magna aliqua. Ut enim ad minim veniam, quis no
dolor sit amet
consectefur adipisicing sed
Elt elusmod, tempor incididunt, ut labore, et dolore.
$1.23
consectefur adipisicing sed
Elt elusmod, tempor incididunt, ut labore, et dolore.
Aliqua: $1.23

FIG. 54

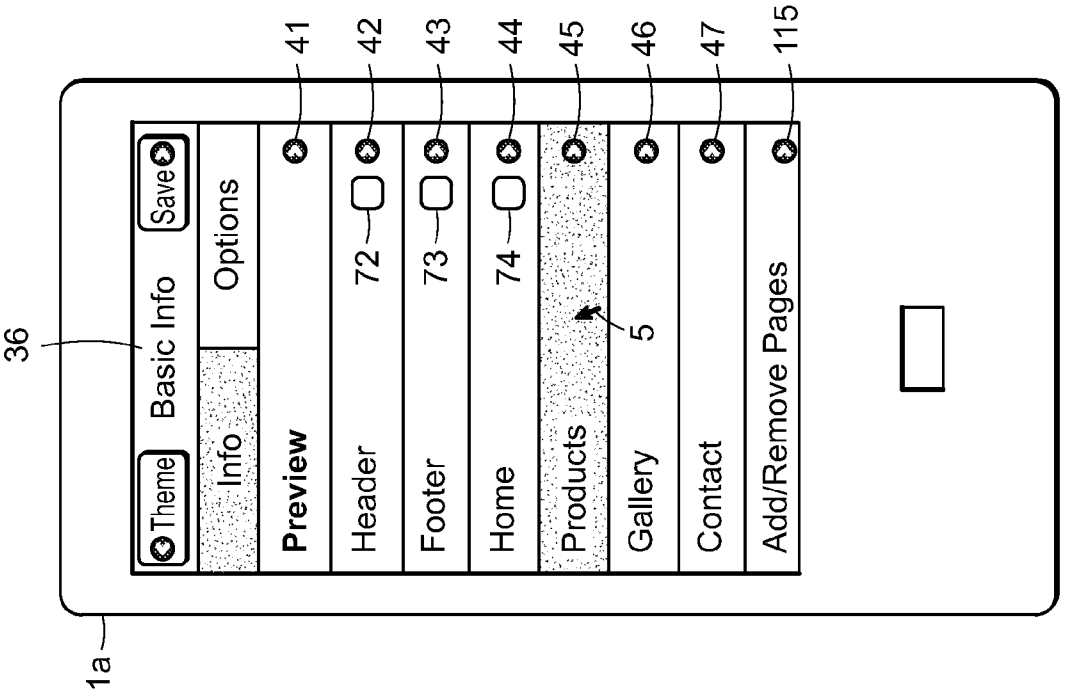
1a
36
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
Products
Gallery
Contact
Add/Remove Pages
41
42
43
44
45
46
47
115
72
73
74
5

FIG. 53

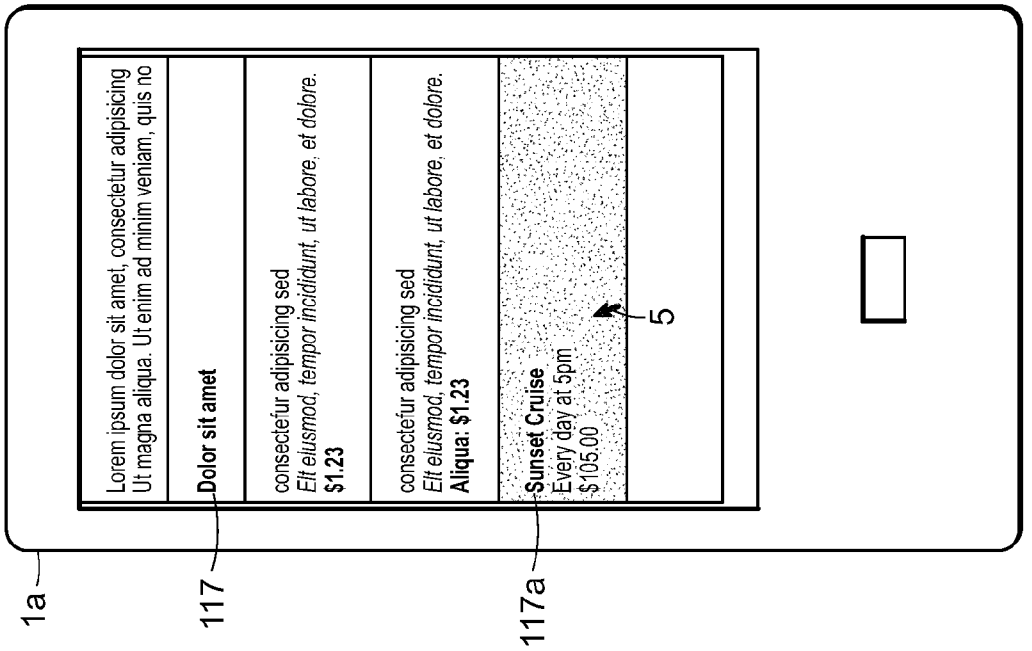
Lorem ipsum dolor sit amet, consectetur adipisicing
Ut magna aliqua. Ut enim ad minim veniam, quis no
Dolor sit amet
consectetur adipisicing sed
Eit eiusmod, tempor incididunt, ut labore, et dolore.
$1.23
consectetur adipisicing sed
Eit eiusmod, tempor incididunt, ut labore, et dolore.
Aliqua: $1.23
Sunset Cruise
Every day at 5pm
$105.00
5
1a
117
117a

FIG. 56

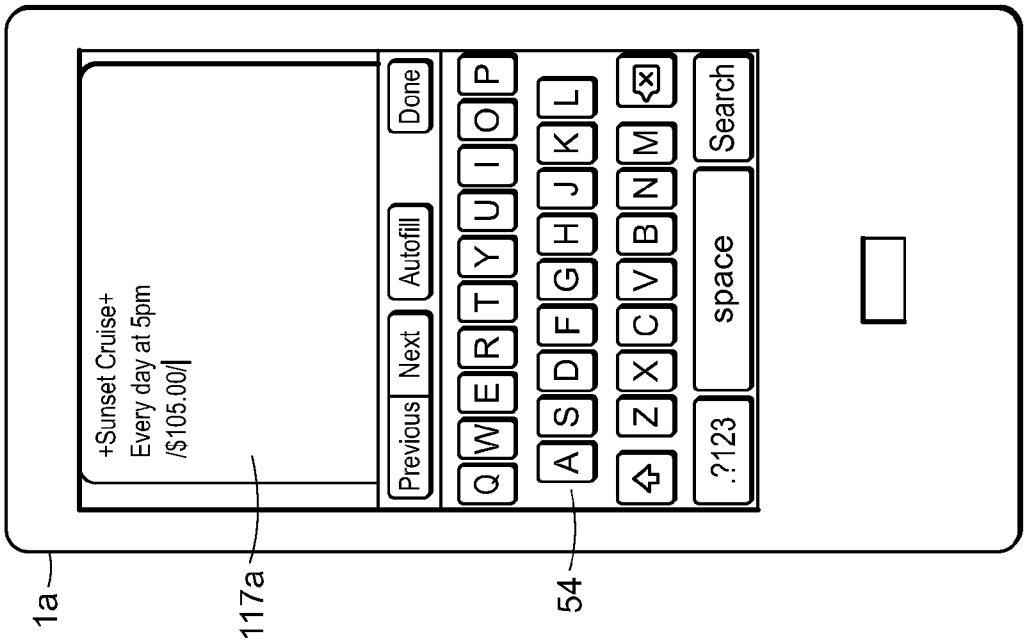
+Sunset Cruise+
Every day at 5pm
/$105.00/
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Search
1a
117a
54

FIG. 55

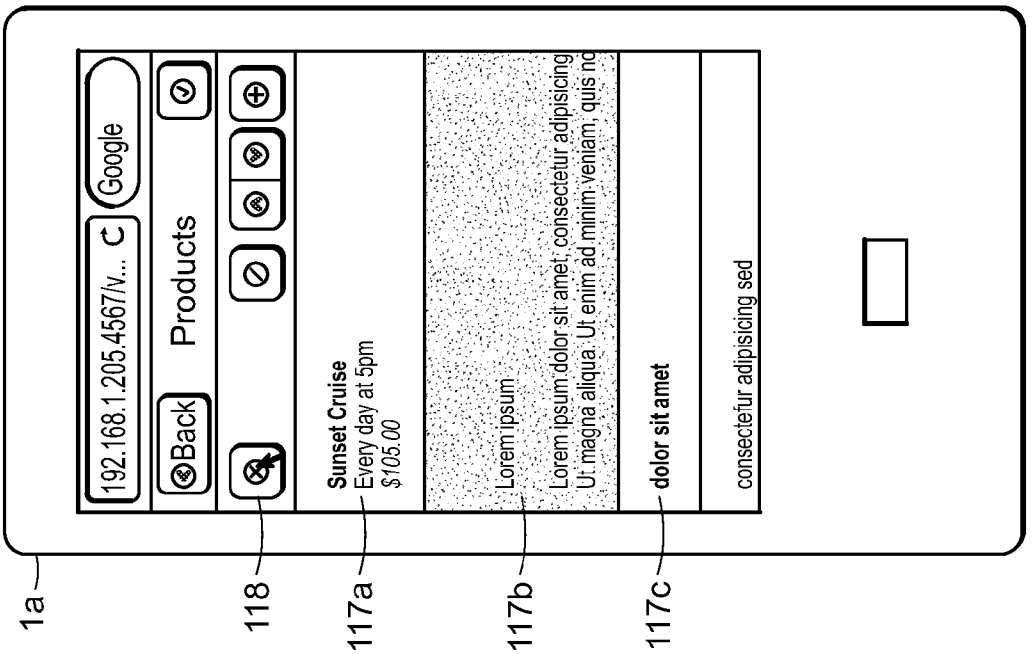
1a
192.168.1.205.4567/v...
Google
Back
Products
118
Sunset Cruise
Every day at 5pm
$105.00
117a
Lorem ipsum
Lorem ipsum dolor sit amet, consectetur adipisicing
Ut magna aliqua. Ut enim ad minim veniam, quis no
117b
dolor sit amet
117c
consectetur adipisicing sed

FIG. 58

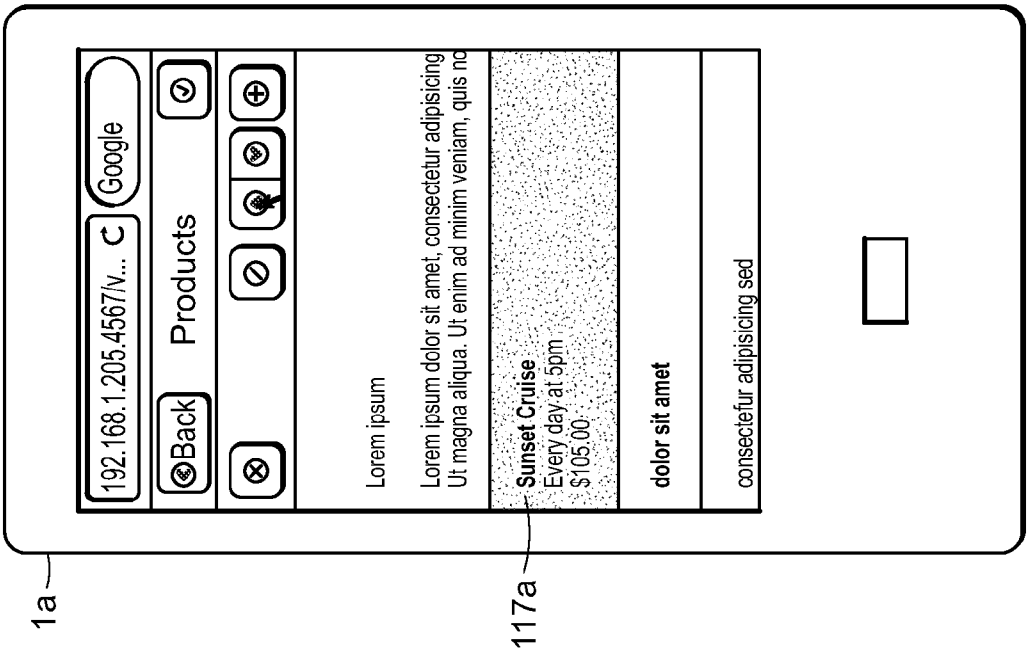
1a
192.168.1.205.4567/v...
Google
Back
Products
Lorem ipsum
Lorem ipsum dolor sit amet, consectetur adipisicing
Ut magna aliqua. Ut enim ad minim veniam, quis no
Sunset Cruise
Every day at 5pm
$105.00
117a
dolor sit amet
consectetur adipisicing sed

FIG. 57

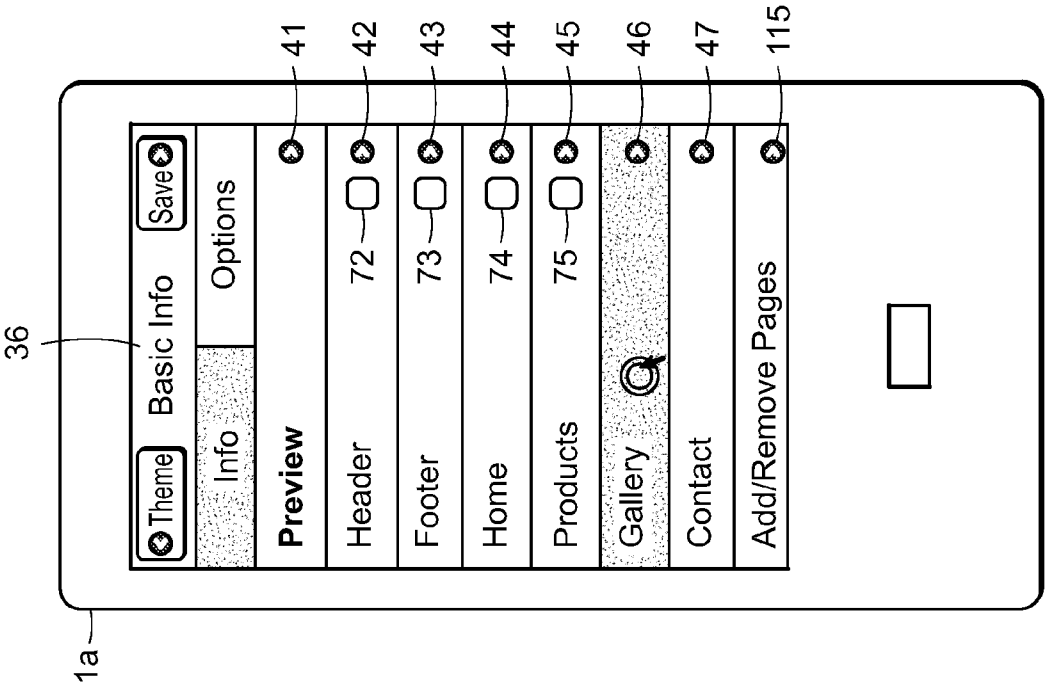
1a
36
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
Products
Gallery
Contact
Add/Remove Pages
41
42
43
44
45
46
47
115
72
73
74
75

FIG. 60

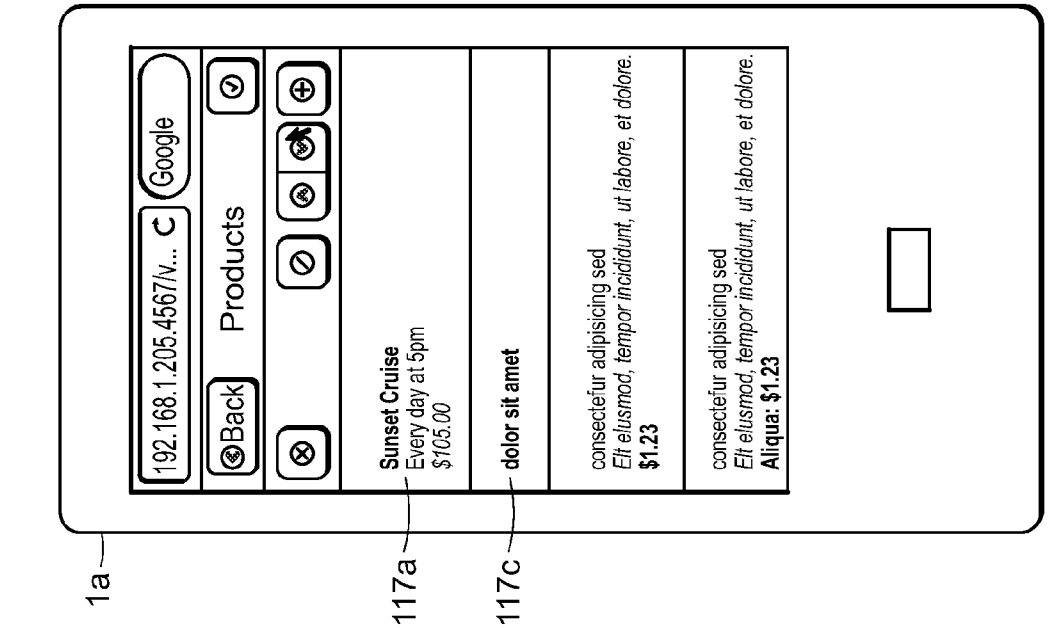
1a
192.168.1.205.4567/v...
Google
Back
Products
Sunset Cruise
Every day at 5pm
$105.00
dolor sit amet
consectetur adipisicing sed
Elt elusmod, tempor incididunt, ut labore, et dolore.
$1.23
consectetur adipisicing sed
Elt elusmod, tempor incididunt, ut labore, et dolore.
Aliqua: $1.23
117a
117c

FIG. 59

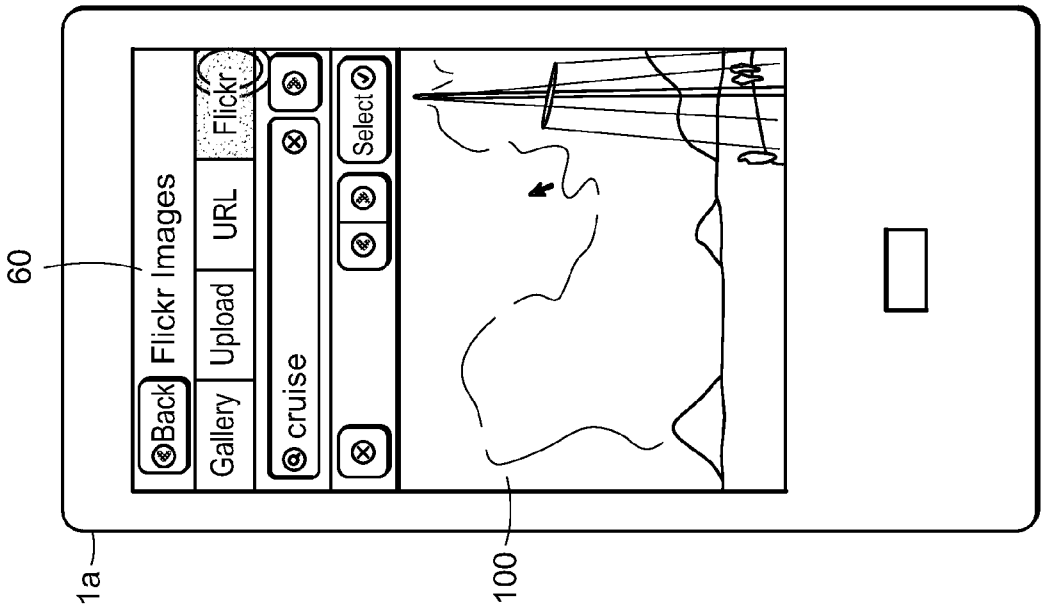
60
Back
Flickr Images
Gallery
Upload
URL
Flickr
cruise
Select
1a
100

FIG. 62

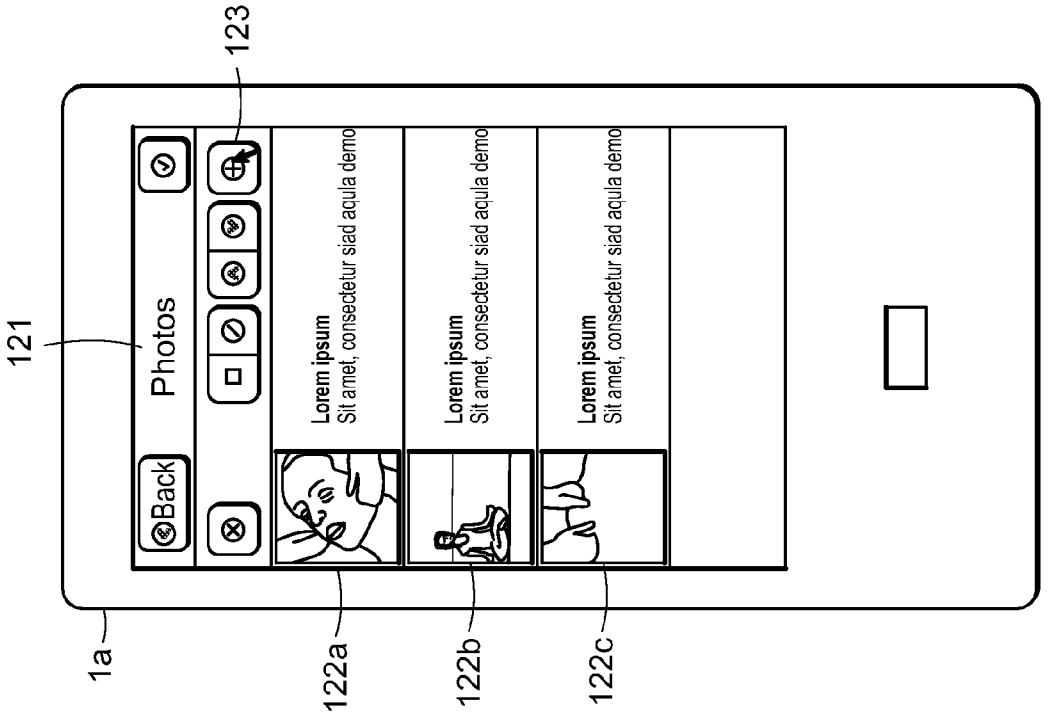
121
123
Back
Photos
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
1a
122a
122b
122c

FIG. 61

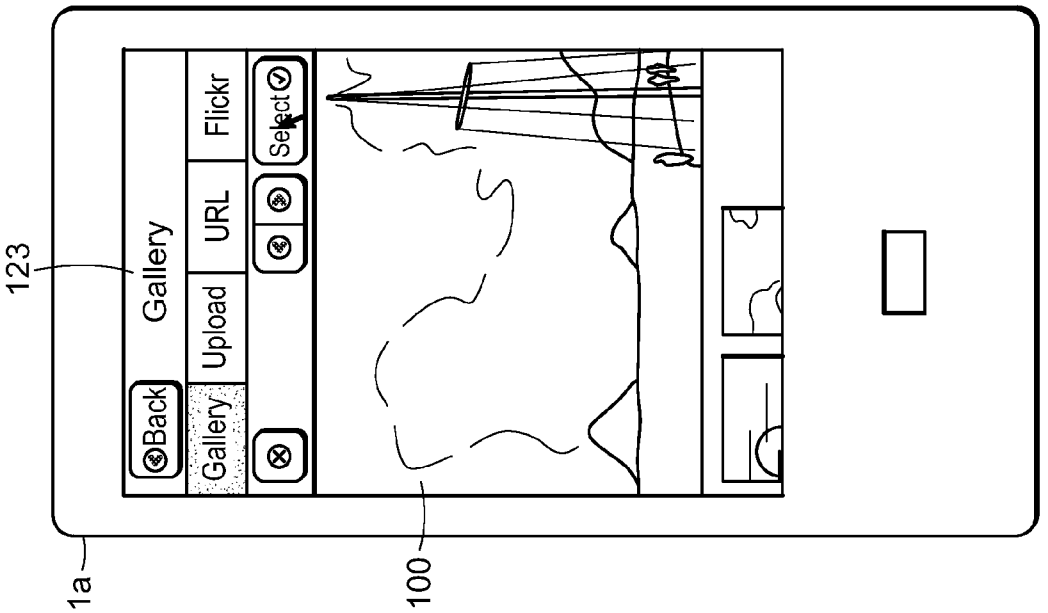
123
Back
Gallery
Gallery
Upload
URL
Flickr
Select
1a
100

FIG. 64

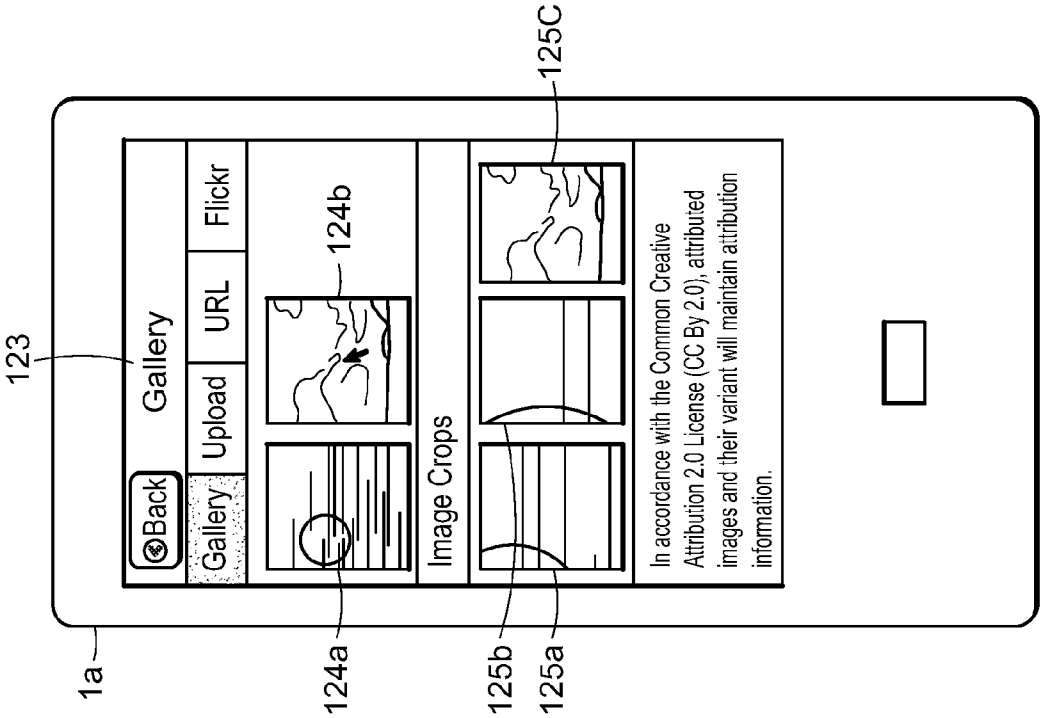
123
Back
Gallery
Gallery
Upload
URL
Flickr
124b
Image Crops
In accordance with the Common Creative Attribution 2.0 License (CC By 2.0), attributed images and their variant will maintain attribution information.
1a
124a
125b
125a
125C

FIG. 63

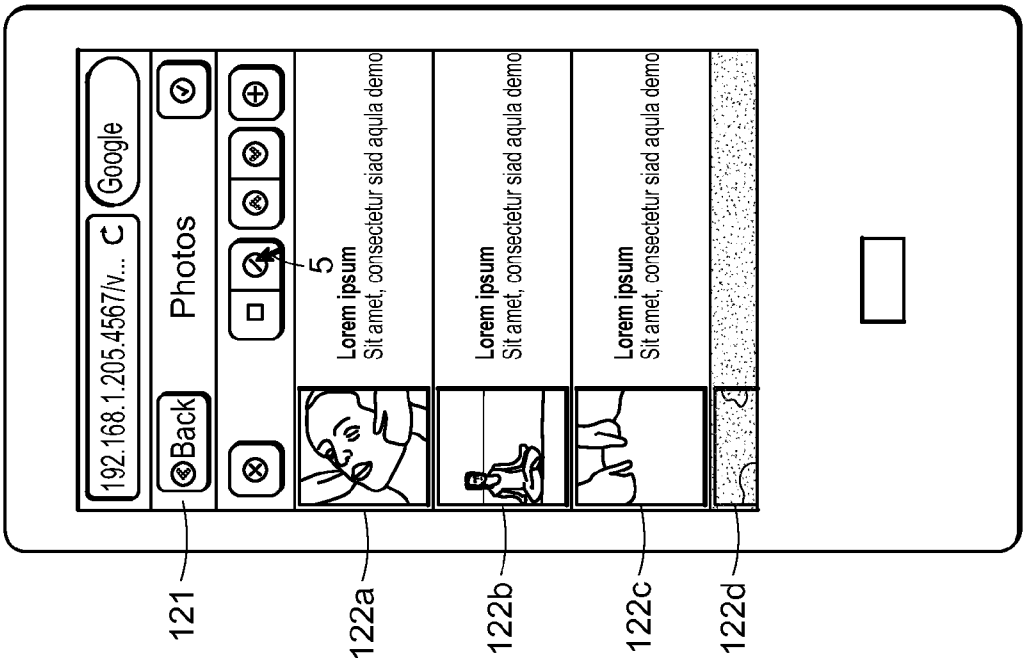
192.168.1.205.4567/v...
Google
Back
Photos
5
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
121
122a
122b
122c
122d

FIG. 66

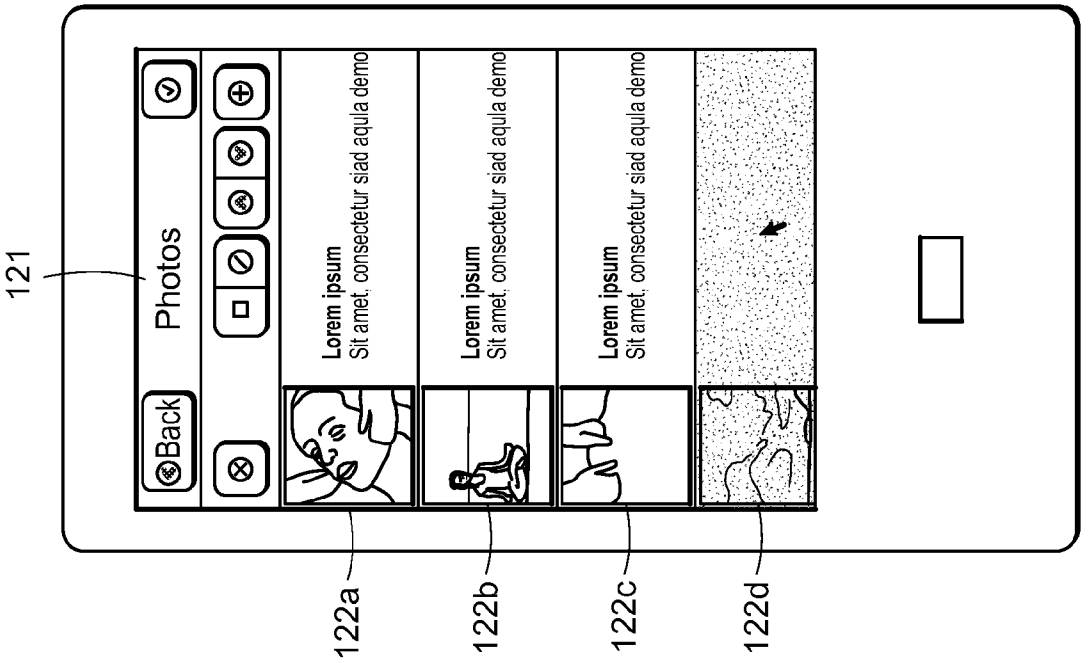
121
Back
Photos
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
Lorem ipsum
Sit amet, consectetur siad aqula demo
122a
122b
122c
122d

FIG. 65

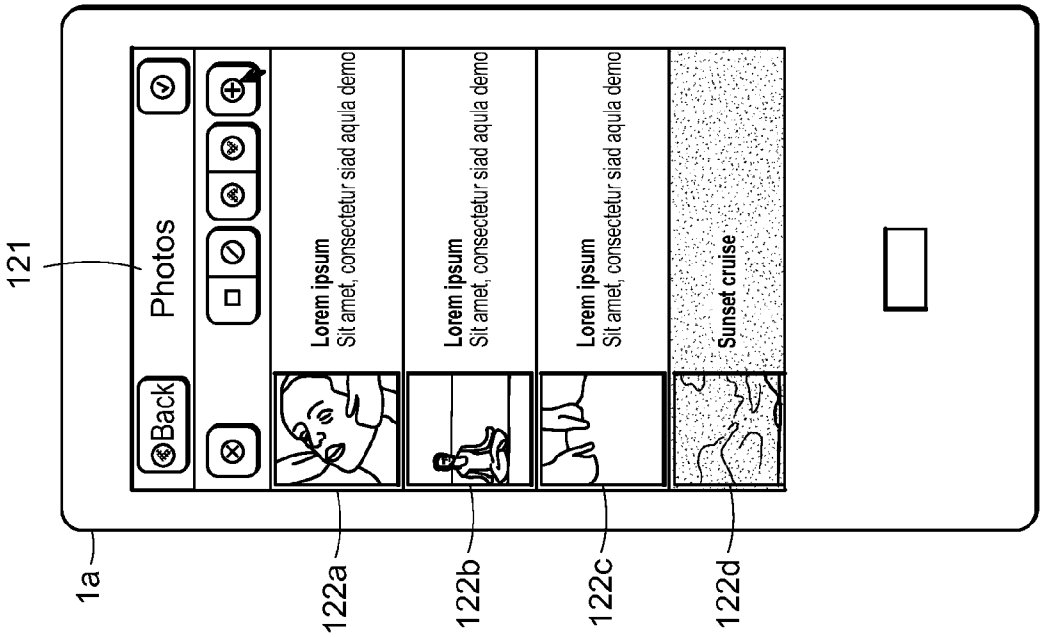
121
Back
Photos
Lorem ipsum
Sit amet, consectetur siad aquia demo
Lorem ipsum
Sit amet, consectetur siad aquia demo
Lorem ipsum
Sit amet, consectetur siad aquia demo
Sunset cruise
1a
122a
122b
122c
122d

FIG. 68

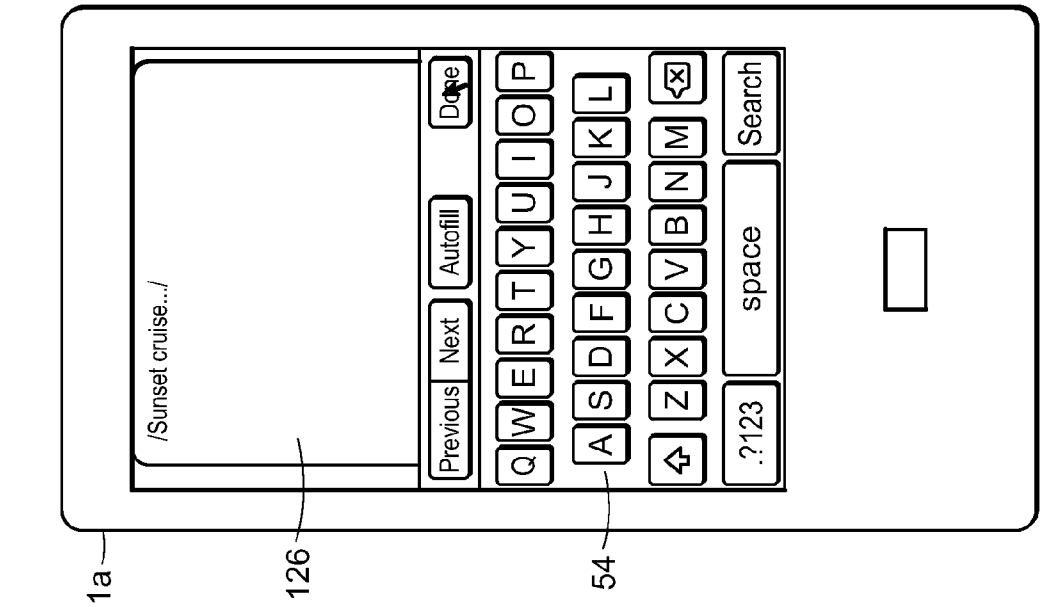
/Sunset cruise.../
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Search
1a
126
54

FIG. 67

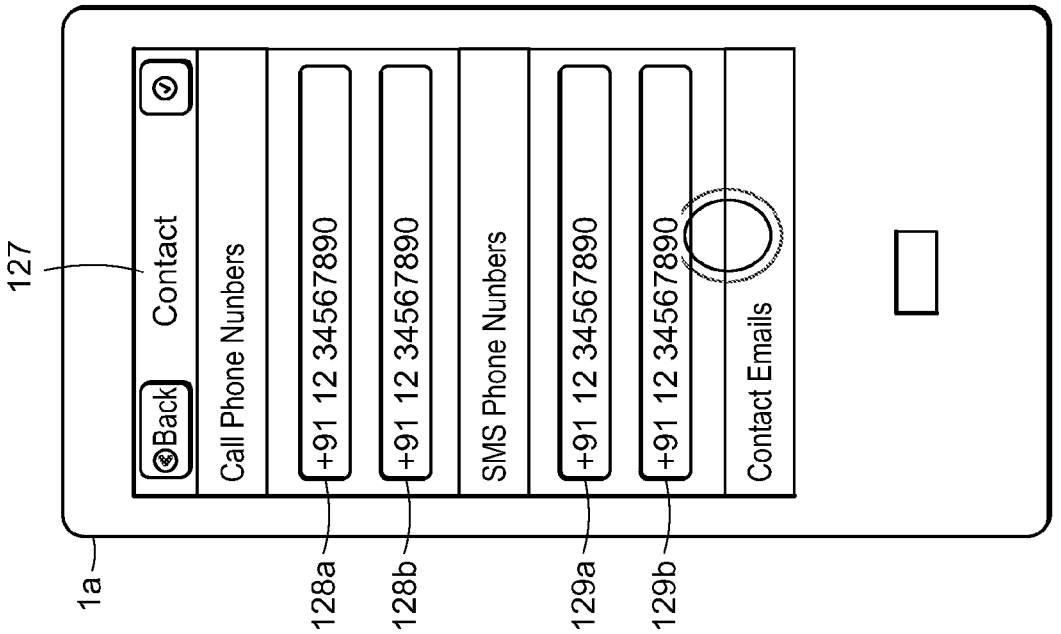
127
Back
Contact
Call Phone Nunbers
+91 12 34567890
+91 12 34567890
SMS Phone Nunbers
+91 12 34567890
+91 12 34567890
Contact Emails
1a
128a
128b
129a
129b

FIG. 70

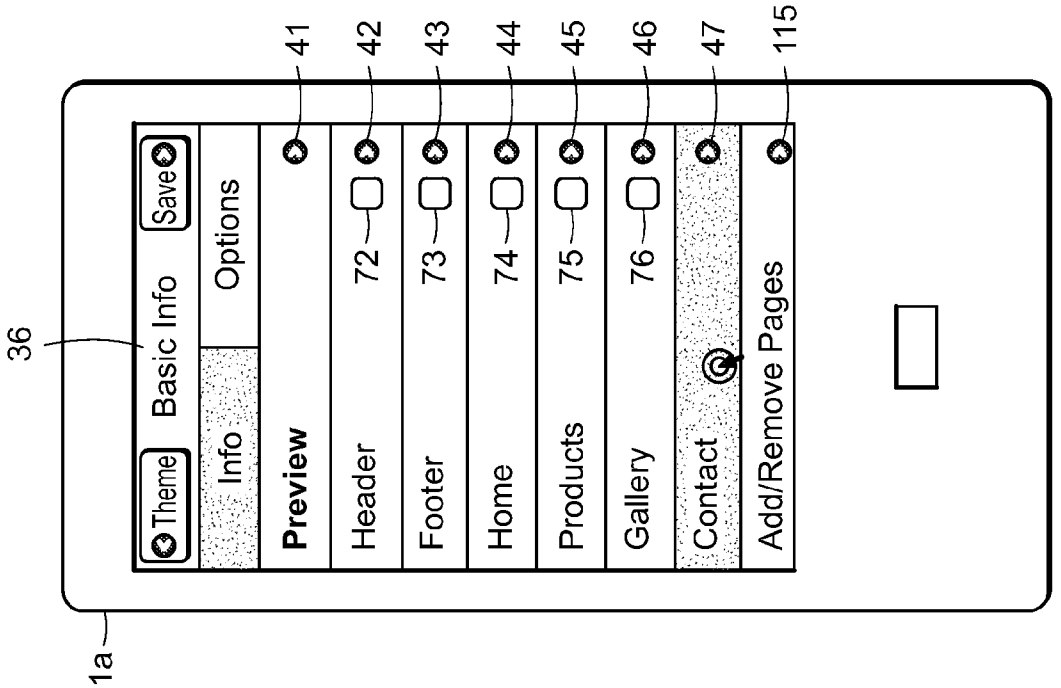
36
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
Products
Gallery
Contact
Add/Remove Pages
41
42
43
44
45
46
47
115
72
73
74
75
76
1a

FIG. 69

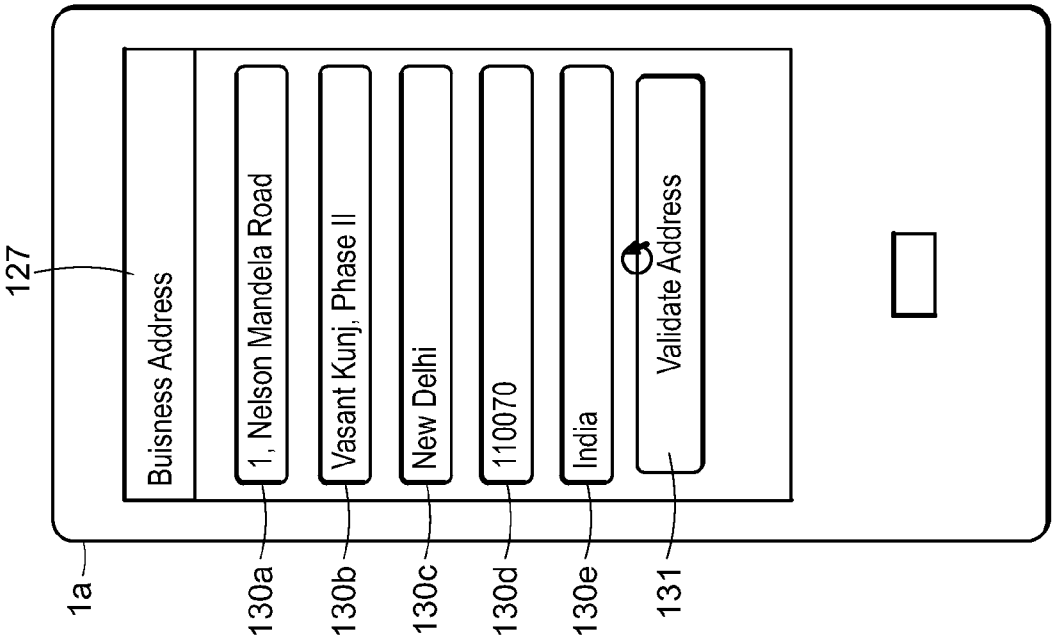
127
Buisness Address
1, Nelson Mandela Road
Vasant Kunj, Phase II
New Delhi
110070
India
Validate Address
1a
130a
130b
130c
130d
130e
131

FIG. 72

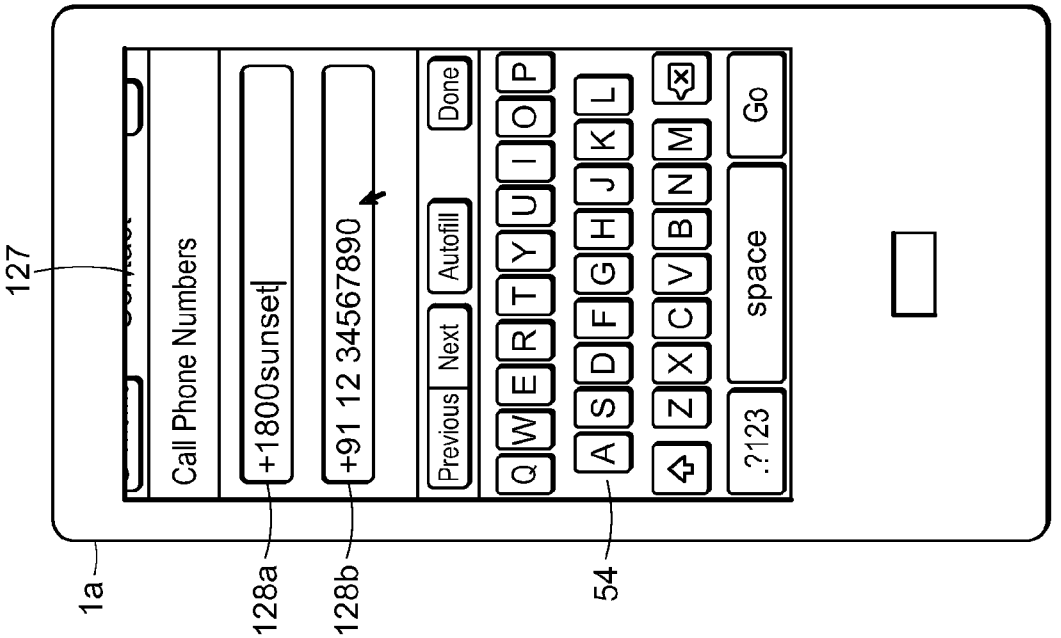
127
Call Phone Numbers
+1800sunset
+91 12 34567890
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Go
1a
128a
128b
54

FIG. 71

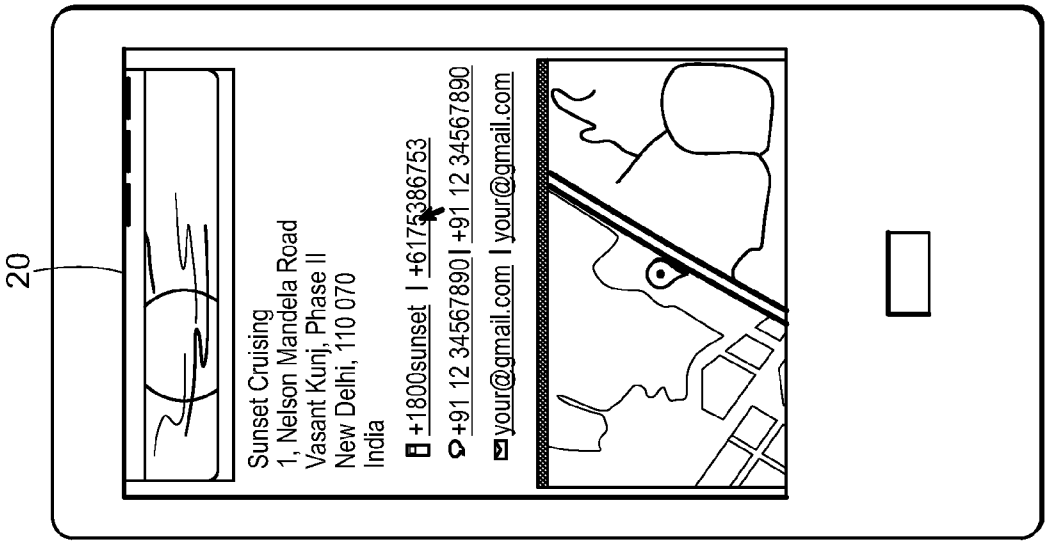
20
Sunset Cruising
1, Nelson Mandela Road
Vasant Kunj, Phase II
New Delhi, 110 070
India
+1800sunset | +6175386753
+91 12 34567890 | +91 12 34567890
your@gmail.com | your@gmail.com

FIG. 74

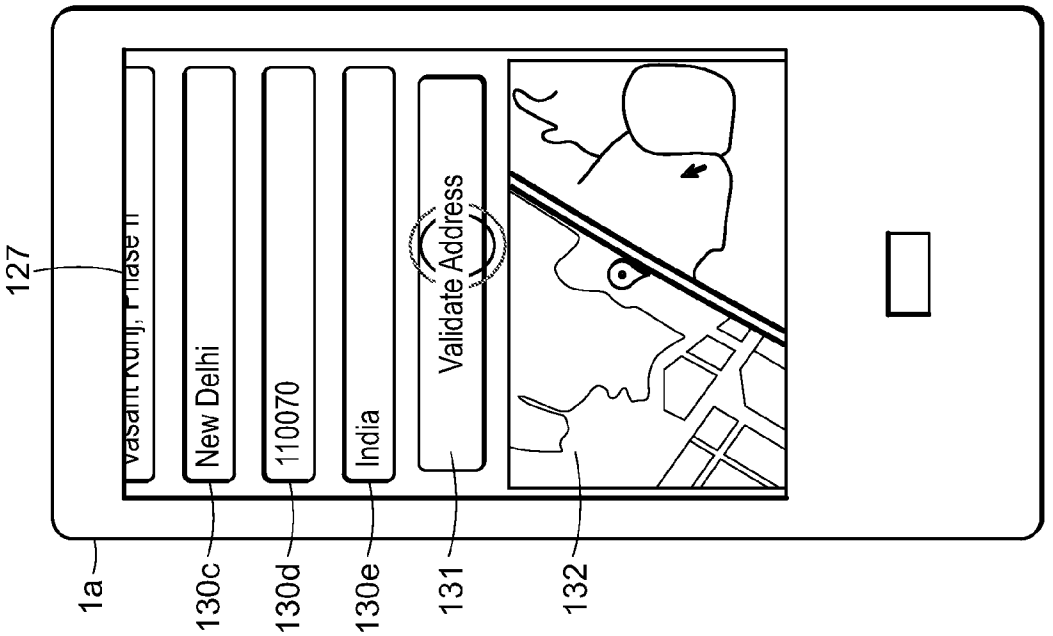
127
Vasant Kunj, Phase II
New Delhi
110070
India
Validate Address
1a
130c
130d
130e
131
132

FIG. 73

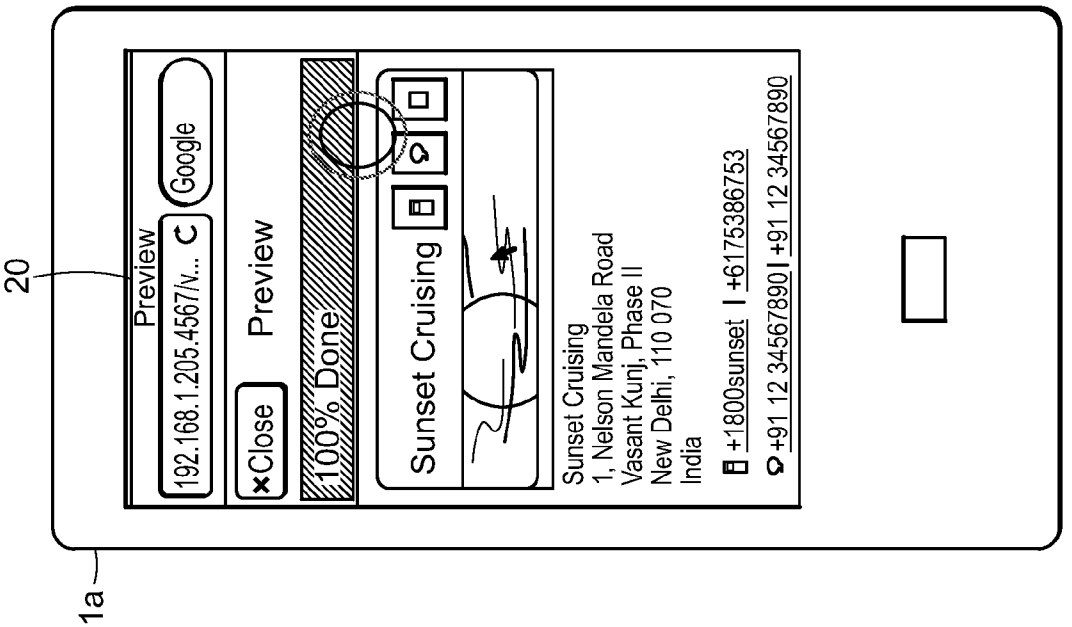
20
1a
Preview
192.168.1.205.4567/v...
Google
Close
Preview
100% Done
Sunset Cruising
Sunset Cruising
1, Nelson Mandela Road
Vasant Kunj, Phase II
New Delhi, 110 070
India
+1800sunset | +6175386753
+91 12 34567890 | +91 12 34567890

FIG. 75

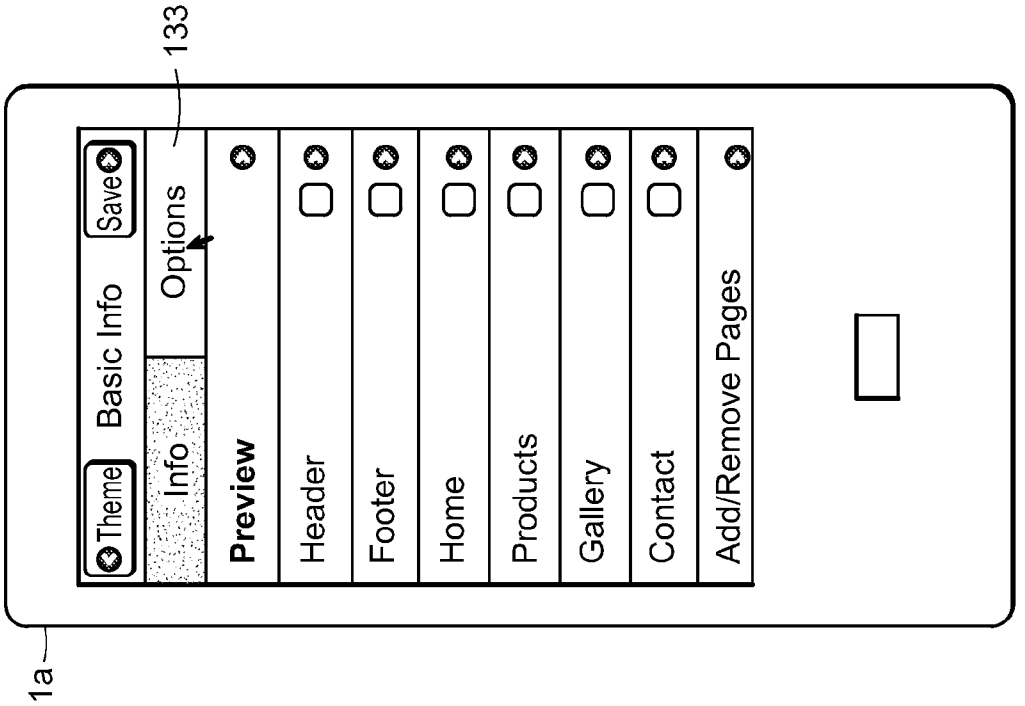
133
1a
Theme
Basic Info
Save
Info
Options
Preview
Header
Footer
Home
Products
Gallery
Contact
Add/Remove Pages

FIG. 76

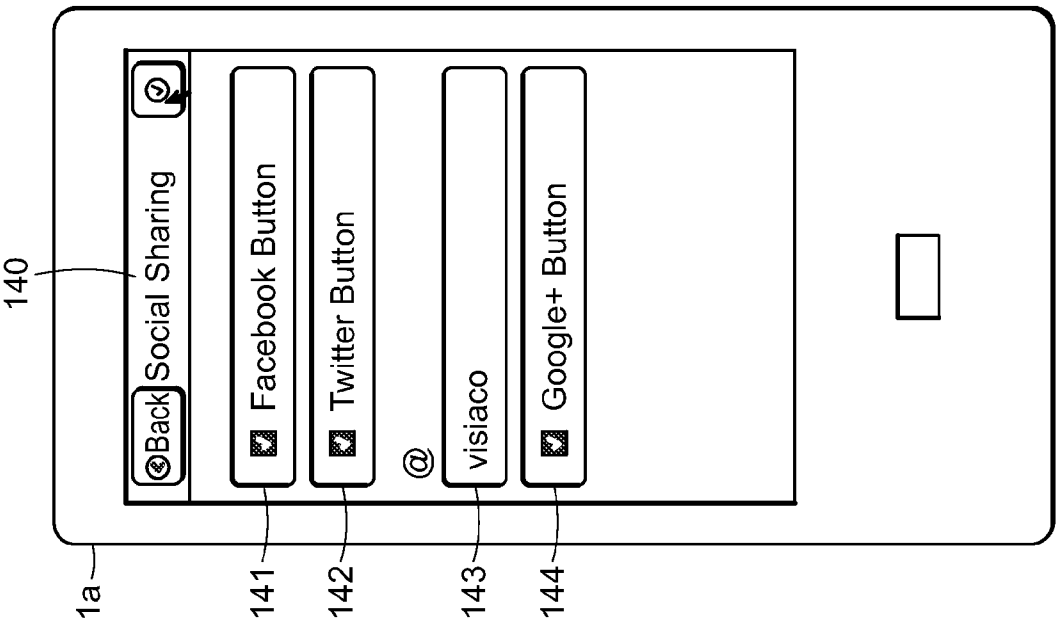
140
Back
Social Sharing
Facebook Button
Twitter Button
@
visiaco
Google+ Button
1a
141
142
143
144

FIG. 78

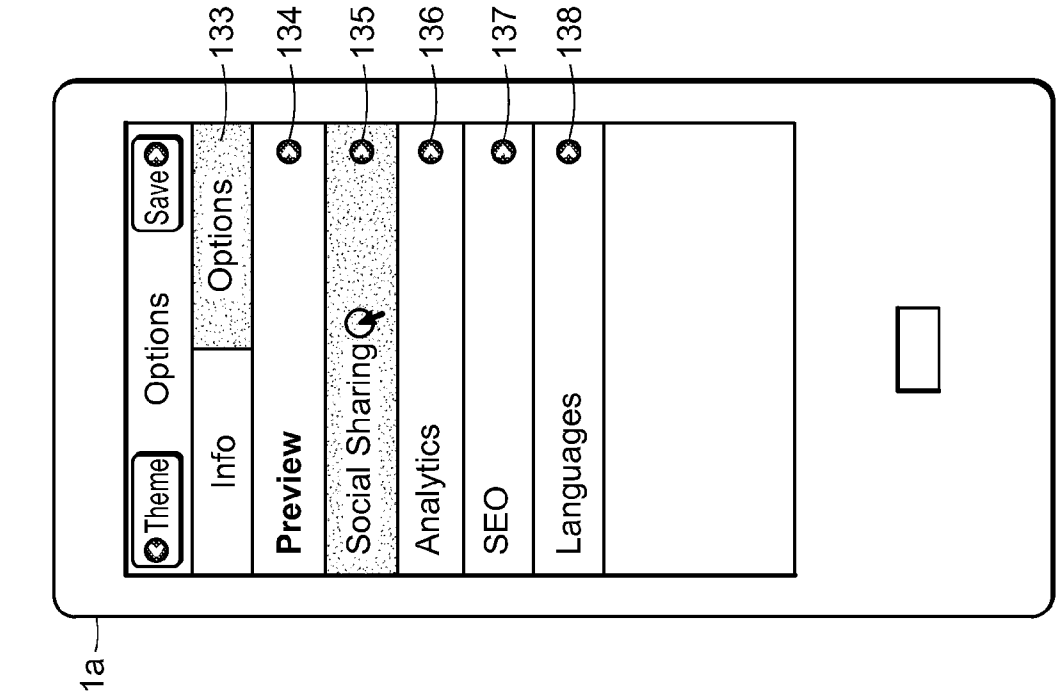
Theme
Options
Save
Info
Options
Preview
Social Sharing
Analytics
SEO
Languages
1a
133
134
135
136
137
138

FIG. 77

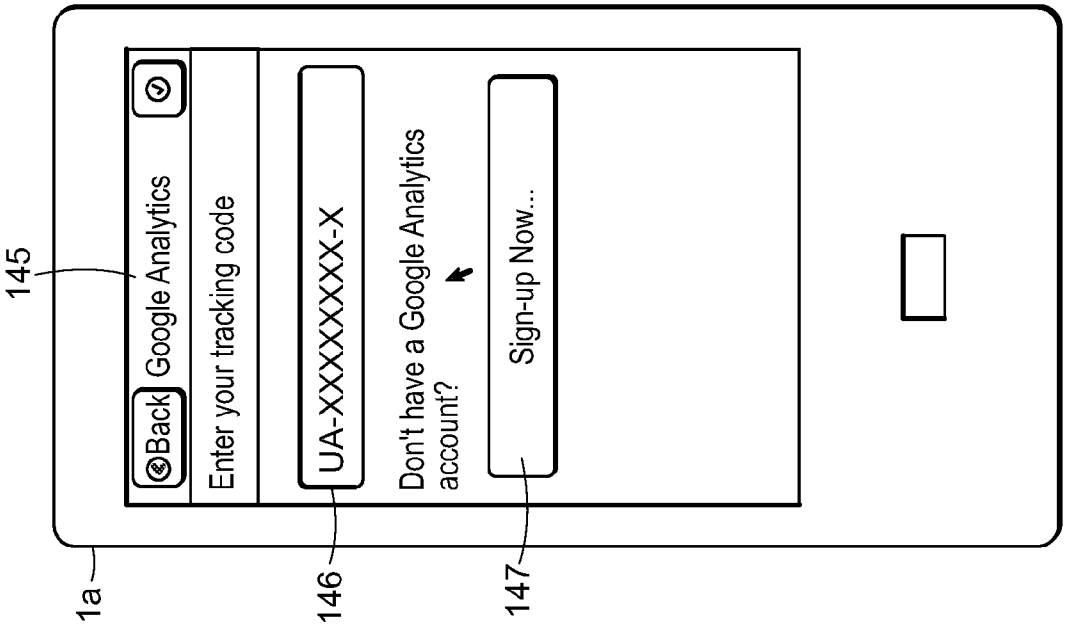
1a
145
Back
Google Analytics
Enter your tracking code
146
UA-XXXXXXXX-X
Don't have a Google Analytics account?
147
Sign-up Now...

FIG. 80

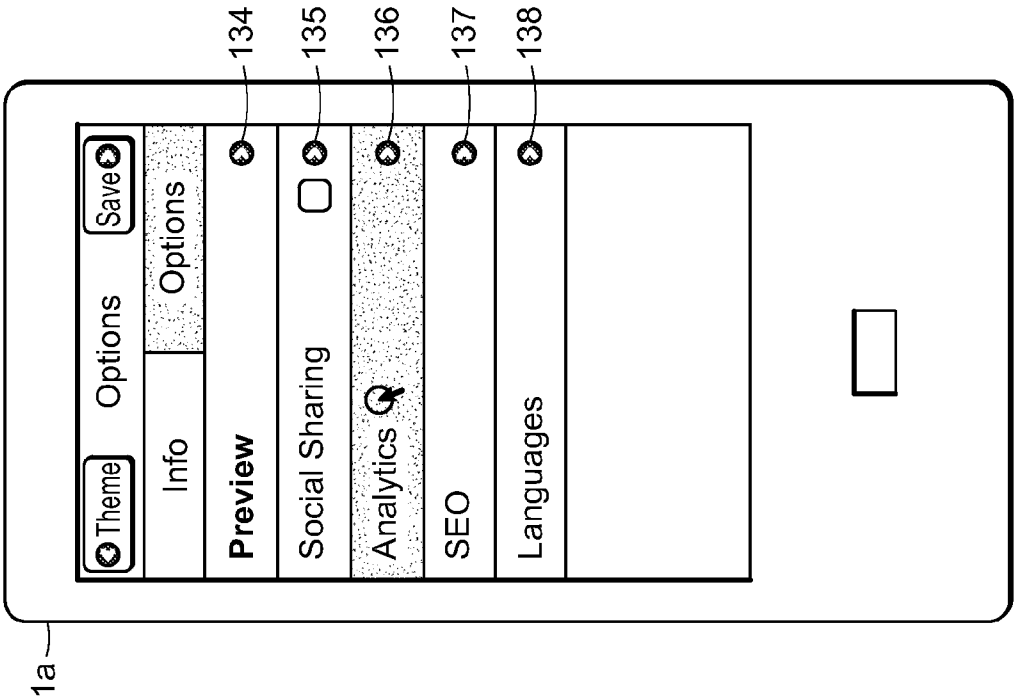
1a
Theme
Options
Save
Info
Options
134
Preview
135
Social Sharing
136
Analytics
137
SEO
138
Languages

FIG. 79

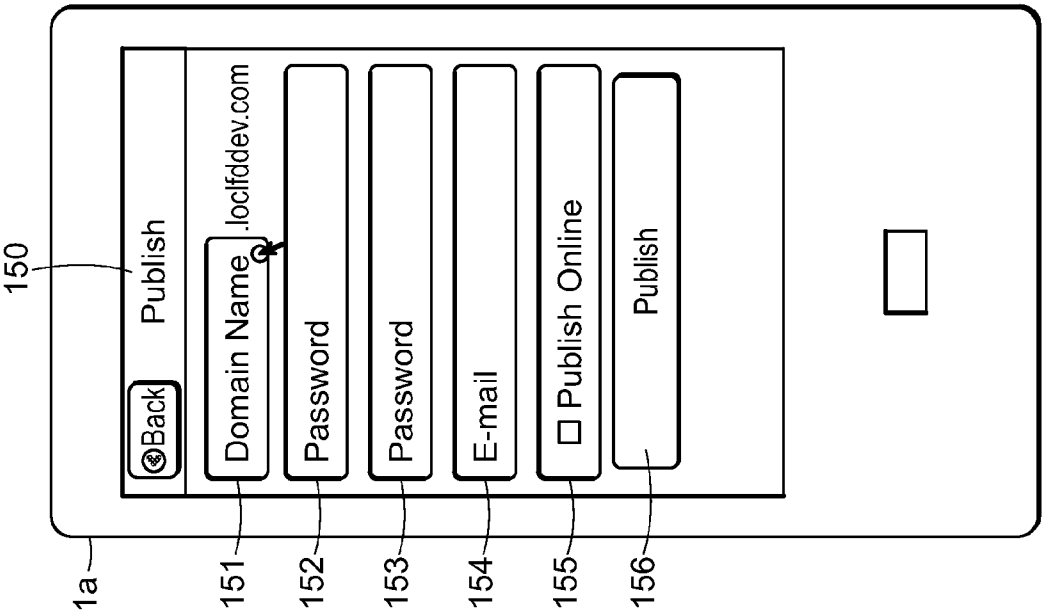
150
Back
Publish
Domain Name
.loclfddev.com
Password
Password
E-mail
Publish Online
Publish
1a
151
152
153
154
155
156

FIG. 82

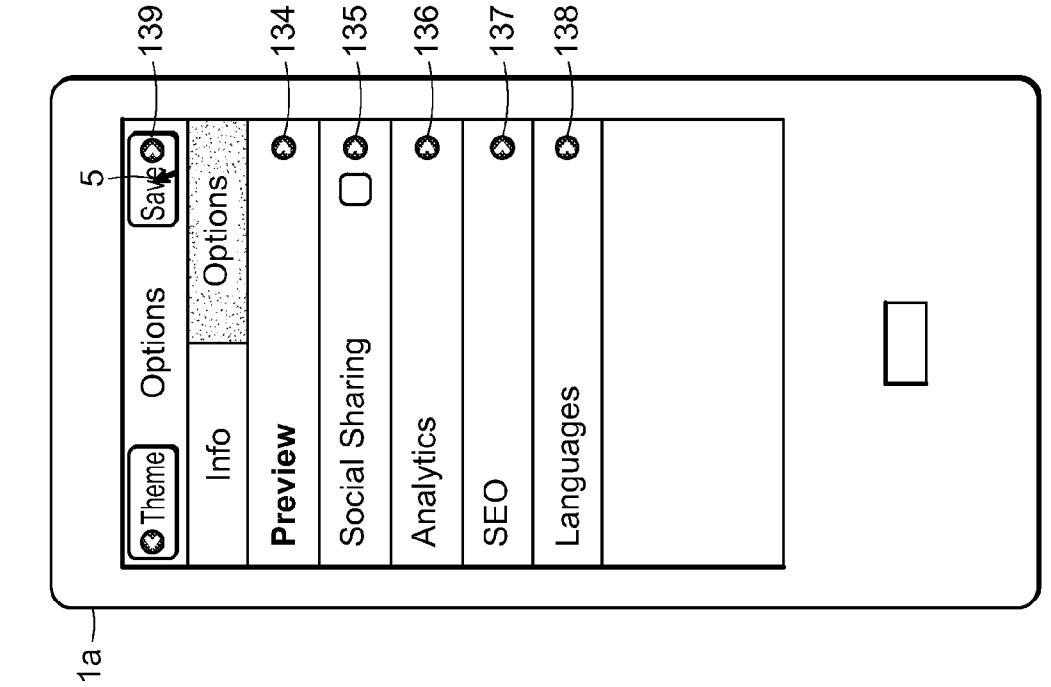
5
139
134
135
136
137
138
Theme
Options
Save
Info
Options
Preview
Social Sharing
Analytics
SEO
Languages
1a

FIG. 81

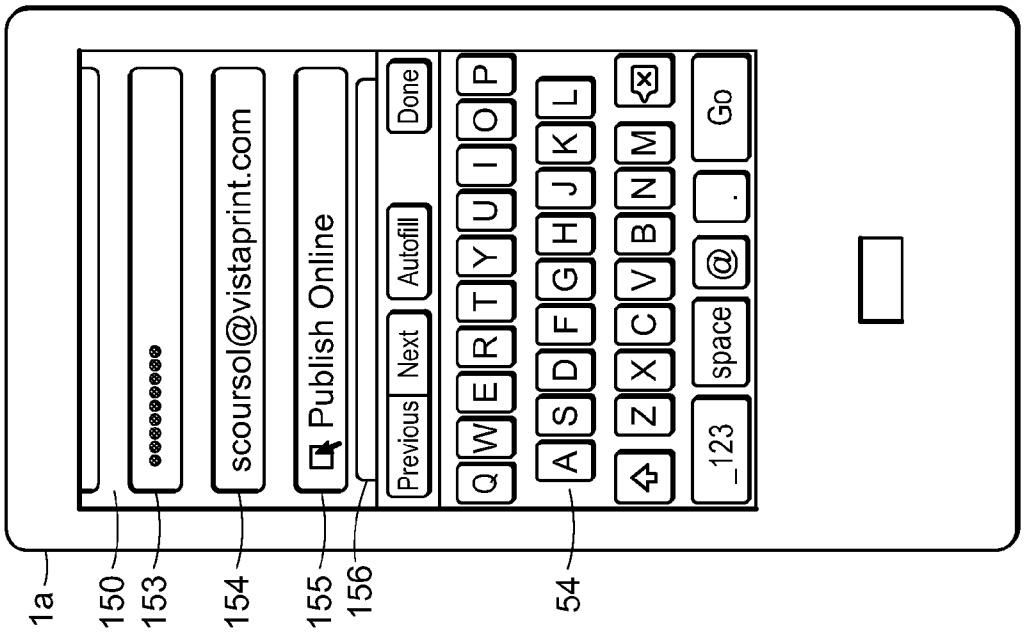
1a
150
153
154
155
156
54
scoursol@vistaprint.com
Publish Online
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Go

FIG. 84

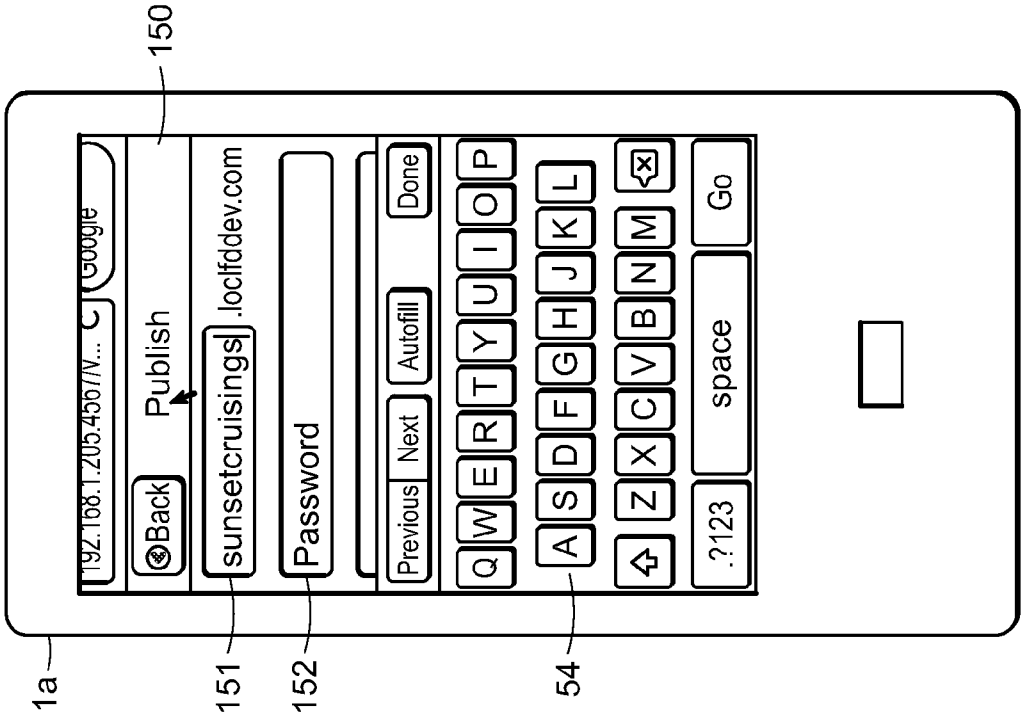
1a
150
151
152
54
Back
Publish
sunsetcruisings
.loclfddev.com
Password
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
.?123
space
Go

FIG. 83

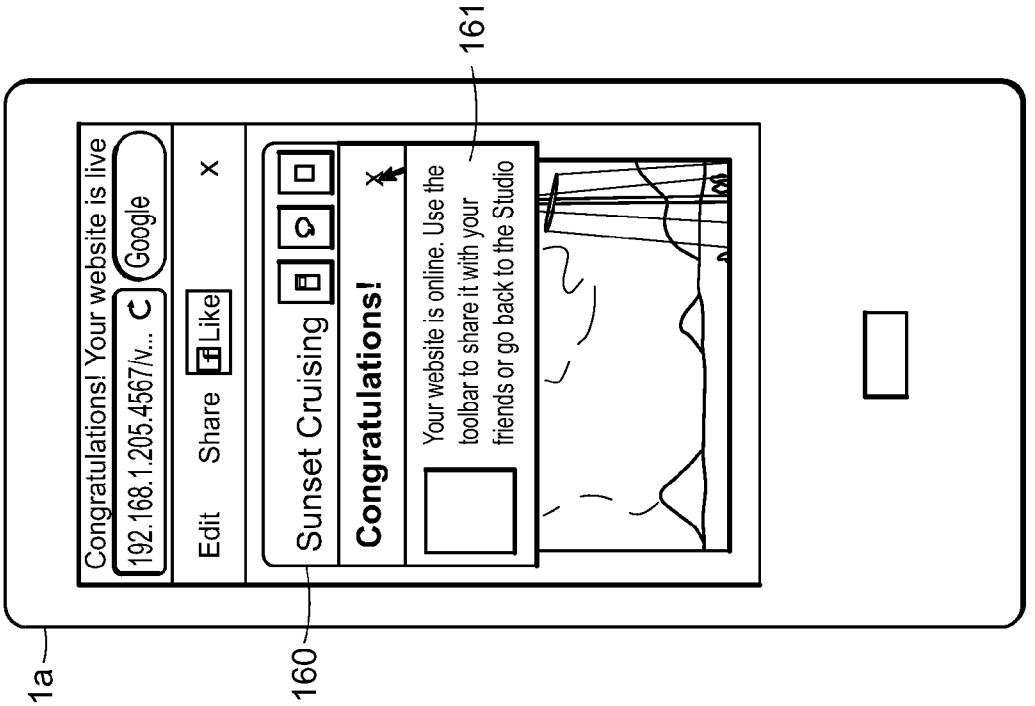
Congratulations! Your website is live
192.168.1.205.4567/v...
Google
Edit
Share
Like
Sunset Cruising
Congratulations!
Your website is online. Use the toolbar to share it with your friends or go back to the Studio
1a
160
161

FIG. 86

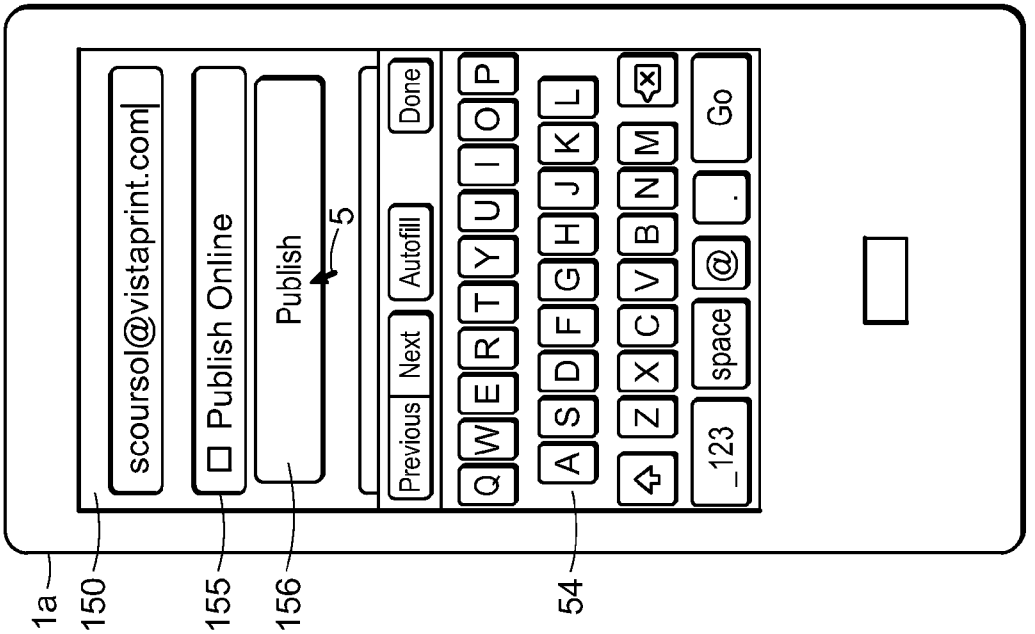
scoursol@vistaprint.com
Publish Online
Publish
5
Previous
Next
Autofill
Done
Q W E R T Y U I O P
A S D F G H J K L
Z X C V B N M
_123
space
@
.
Go
1a
150
155
156
54

FIG. 85

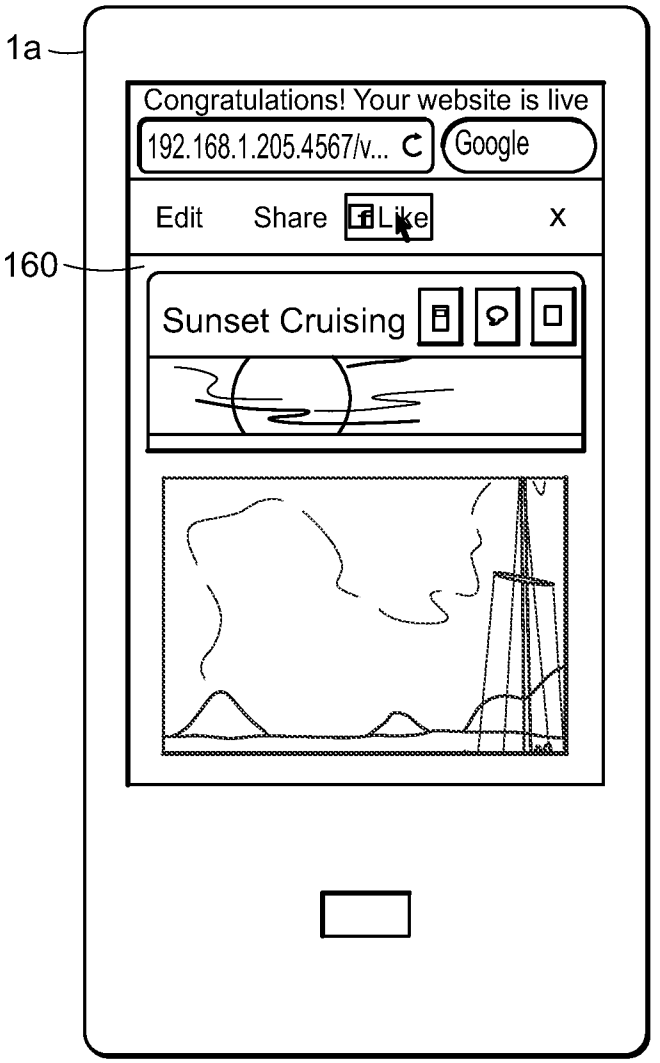
1a
Congratulations! Your website is live
192.168.1.205.4567/v...
Google
Edit
Share
Like
x
160
Sunset Cruising

FIG. 87

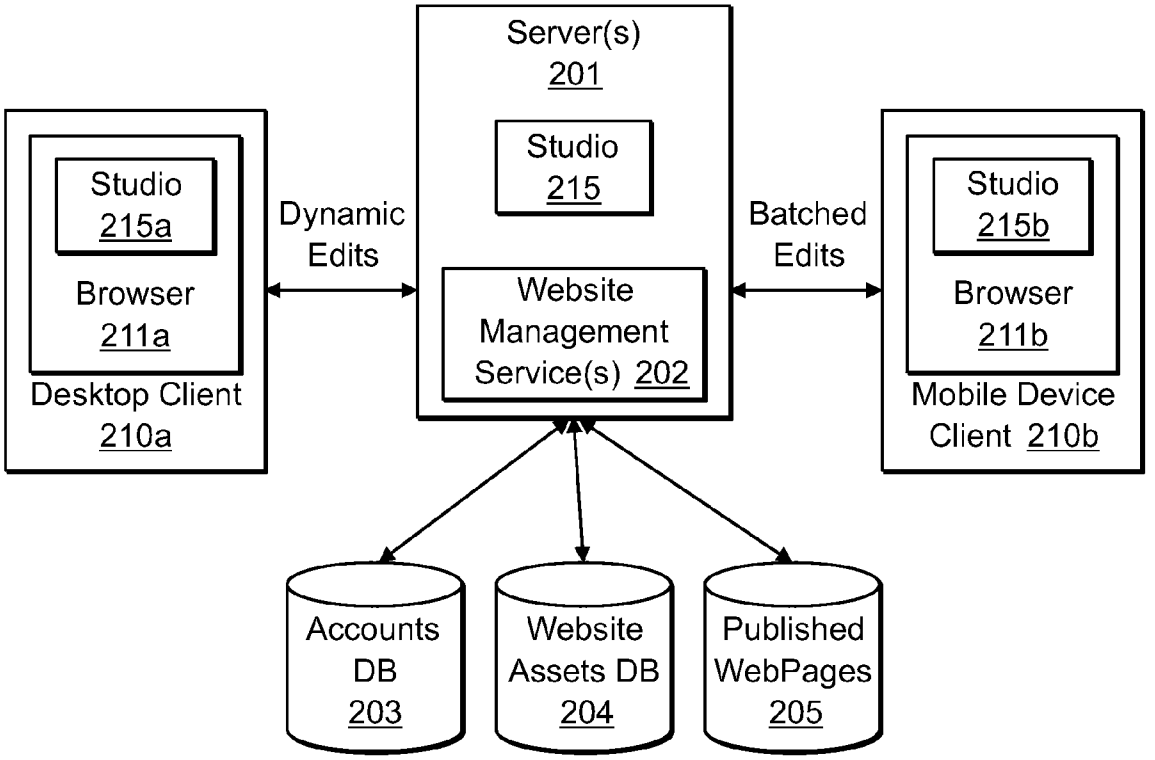
Server(s)
201
Studio
215
Website
Management
Service(s) 202
Studio
215a
Browser
211a
Desktop Client
210a
Dynamic
Edits
Batched
Edits
Studio
215b
Browser
211b
Mobile Device
Client 210b
Accounts
DB
203
Website
Assets DB
204
Published
WebPages
205

FIG. 88

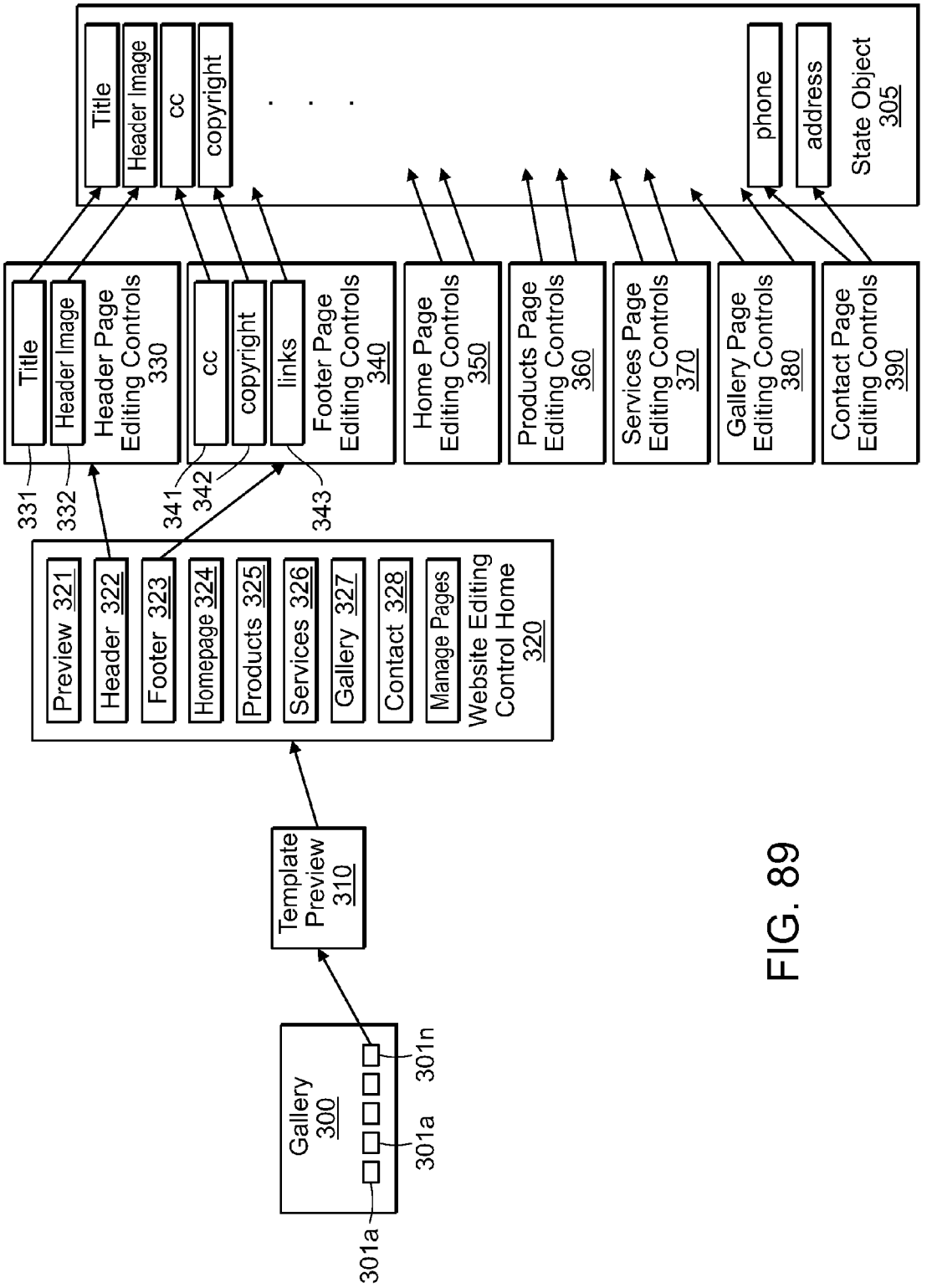
Gallery 300
301a
301a
301n
Template Preview 310
Website Editing Control Home 320
Preview 321
Header 322
Footer 323
Homepage 324
Products 325
Services 326
Gallery 327
Contact 328
Manage Pages
331
332
Title
Header Image
Header Page Editing Controls 330
341
342
343
cc
copyright
links
Footer Page Editing Controls 340
Home Page Editing Controls 350
Products Page Editing Controls 360
Services Page Editing Controls 370
Gallery Page Editing Controls 380
Contact Page Editing Controls 390
Title
Header Image
cc
copyright
. . .
phone
address
State Object 305

FIG. 89

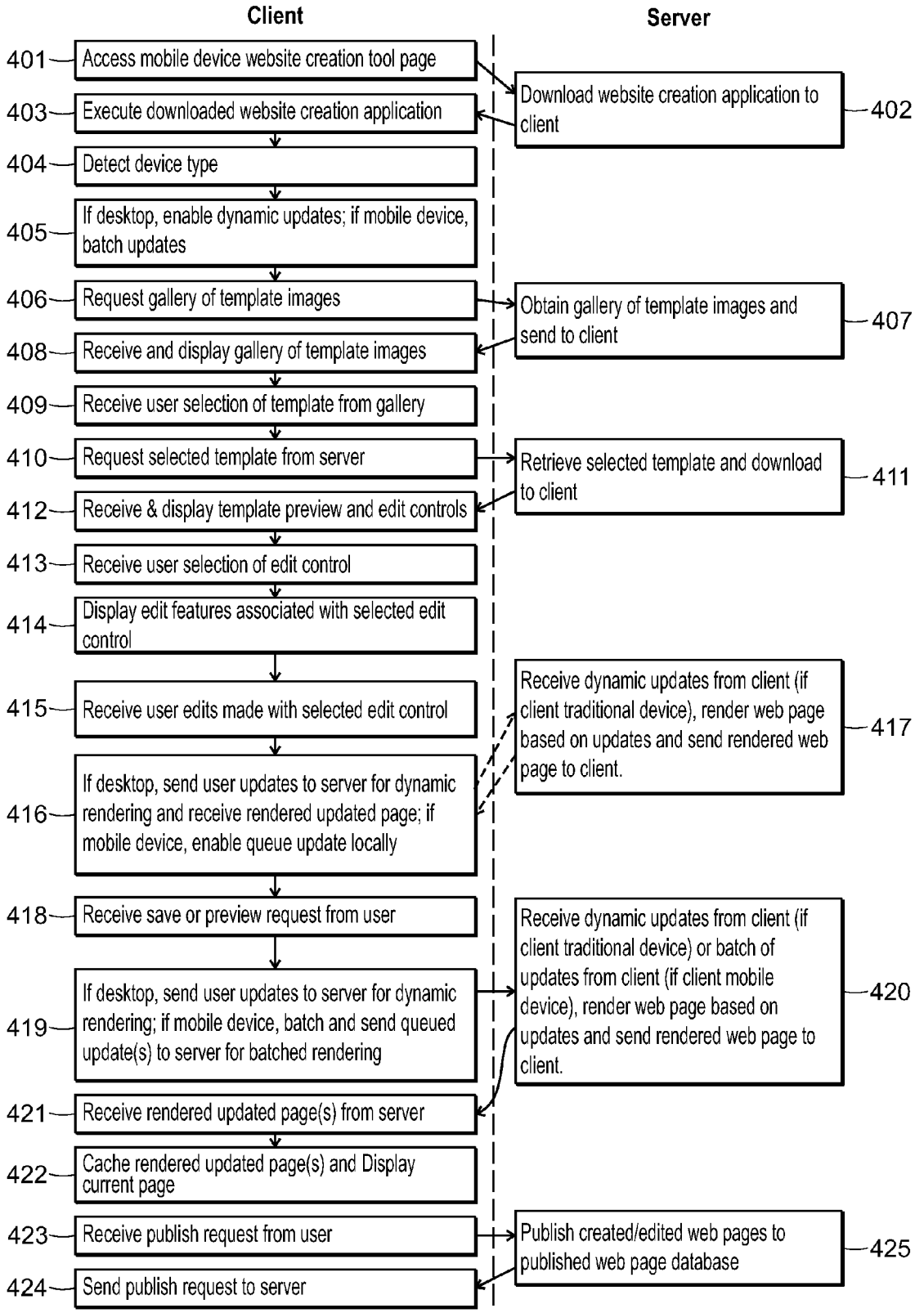
Client
Server
401
Access mobile device website creation tool page
Download website creation application to client
402
403
Execute downloaded website creation application
404
Detect device type
405
If desktop, enable dynamic updates; if mobile device, batch updates
406
Request gallery of template images
Obtain gallery of template images and send to client
407
408
Receive and display gallery of template images
409
Receive user selection of template from gallery
410
Request selected template from server
Retrieve selected template and download to client
411
412
Receive & display template preview and edit controls
413
Receive user selection of edit control
414
Display edit features associated with selected edit control
415
Receive user edits made with selected edit control
Receive dynamic updates from client (if client traditional device), render web page based on updates and send rendered web page to client.
417
416
If desktop, send user updates to server for dynamic rendering and receive rendered updated page; if mobile device, enable queue update locally
418
Receive save or preview request from user
Receive dynamic updates from client (if client traditional device) or batch of updates from client (if client mobile device), render web page based on updates and send rendered web page to client.
420
419
If desktop, send user updates to server for dynamic rendering; if mobile device, batch and send queued update(s) to server for batched rendering
421
Receive rendered updated page(s) from server
422
Cache rendered updated page(s) and Display current page
423
Receive publish request from user
Publish created/edited web pages to published web page database
425
424
Send publish request to server

FIG. 90

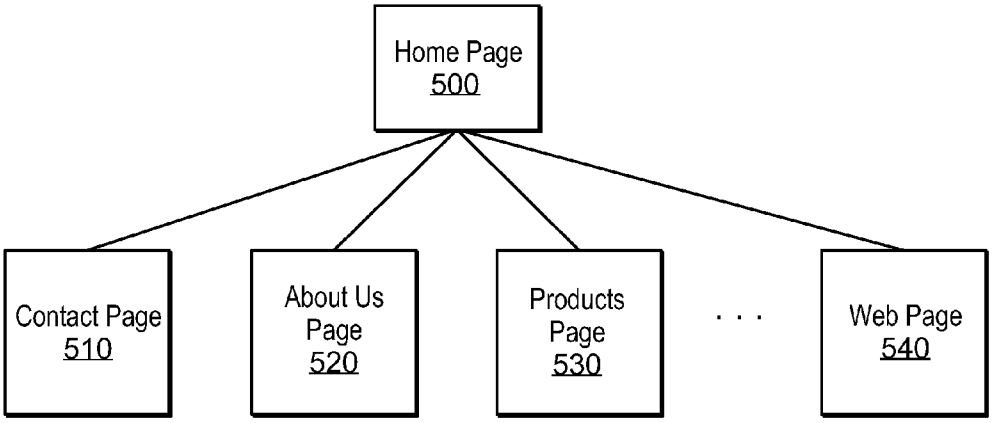
Home Page
500
Contact Page
510
About Us
Page
520
Products
Page
530
. . .
Web Page
540

FIG. 91

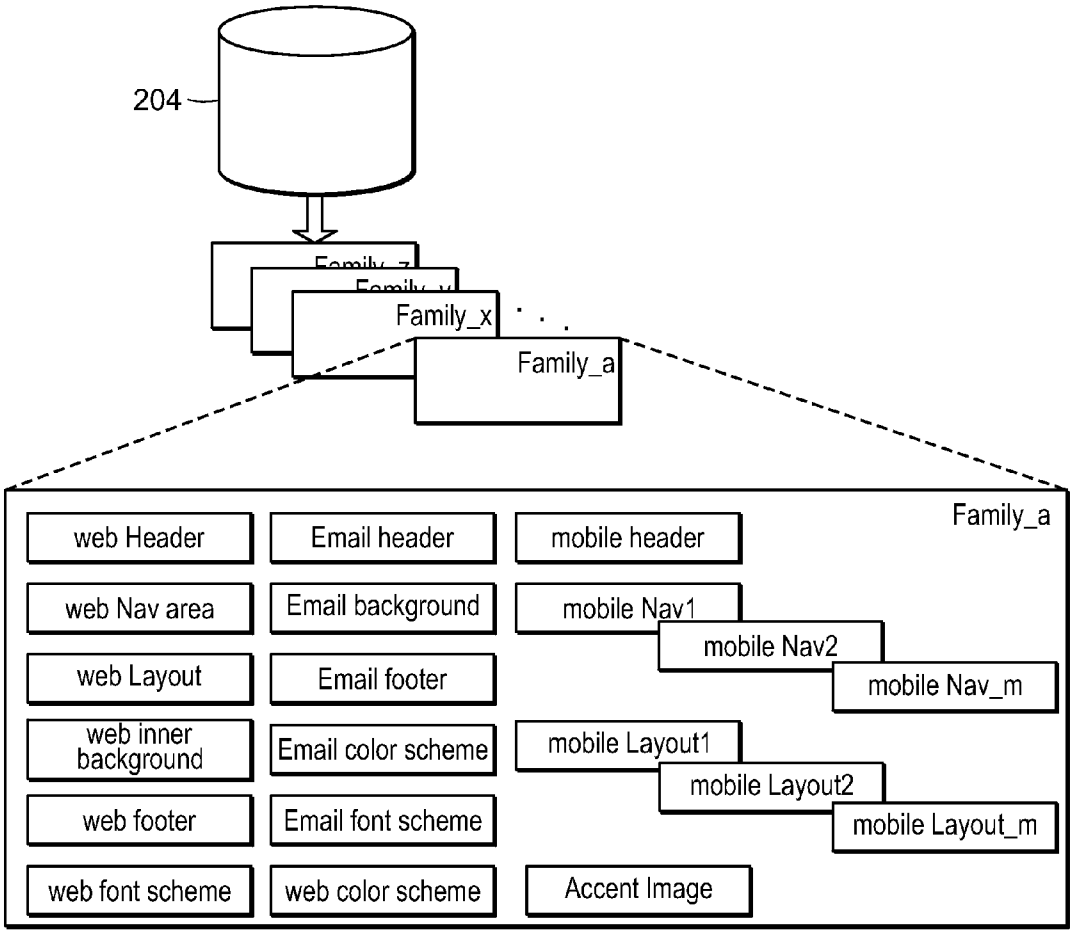
204
Family_x
. . .
Family_a
Family_a
web Header
Email header
mobile header
web Nav area
Email background
mobile Nav1
mobile Nav2
mobile Nav_m
web Layout
Email footer
web inner
background
Email color scheme
mobile Layout1
mobile Layout2
mobile Layout_m
web footer
Email font scheme
web font scheme
web color scheme
Accent Image

FIG. 92

WEBSITE BUILDER SYSTEMS AND METHODS WITH DEVICE DETECTION TO ADAPT RENDERING BEHAVIOR BASED ON DEVICE TYPE

BACKGROUND OF THE INVENTION

The present invention relates generally to building websites, and more particularly to systems, processes, and applications for creation of websites from both traditional computing devices and mobile devices.

The Internet has for a couple of decades been used to relay information, advertise, and engage in e-commerce. More recently, businesses are increasingly turning to social media networks to publish their messages, advertise, and attract and retain customers. With the increase in web site building and publication tools, many users who might not otherwise have the time or skill to create their own websites or the money to hire an outside consultant are now publishing to the World Wide Web. For example, such tools often provide web page templates that allow a user to enter personalized content and select web page layout, styles, fonts, colors, etc., and then immediately publish the completed pages to the Internet.

More recently, the addition of data connectivity capability to cellular phones, resulting in what is known as the "smartphone", has transformed not only the phone industry but also the rate of communication between such users and their accompanying expectations of such devices. Smartphone users now connect directly to the Internet and demand the same capabilities they would have had were they browsing the Internet using a traditional computer.

Furthermore, with the rising popularity of social media networks such as Facebook, LinkedIn, and Twitter, the methods and channels for advertising and connecting to customers have become prolific.

At the present number of websites accessible over the Internet (estimates as of early 2010 are in the hundreds of millions of websites), and as the number of web sites and web pages increases, the importance to a business of having an Internet presence, including a website, a mobile-ready website, and pages on all the big social media networks, cannot be underestimated.

In order to assist a user to quickly establish an "online" presence, several websites offer, often in conjunction with a domain name registration service, website building tools that provide a user interface for guiding the user through a series of questions and tools to select and configure the layout, content, and order of web pages on the user's website. Such website building tools, for example as provided by Vistaprint.com and by Webs.com, provide a number of tools, accessible via an intuitive user interface, that allow a user to select a theme, a layout, images, text, and a font and color scheme. Such tools may also include graphical controls that upon activation by the user, allow the user to add functionality to the web page. For example, such graphical controls often enable such functionality as adding a map to the web page, adding a form, etc.

Many Internet users access the Internet using their phone or mobile device more frequently than using a traditional device such as a desktop or laptop computer. Some users even access the Internet exclusively using a mobile device. However, the traditional website building applications have not kept pace with this trend. Traditional website building applications are designed for creating web pages optimized for display on the larger screen of the desktop and/or laptop displays. The content of traditional web pages often dictates frequent interaction with the server hosting the website building application

and/or hosted website. Often, such website building applications allow the user to create highly customized stylized web pages with images and other content which pass from the server to the requesting device as large data files (500 KB up to several Mbytes). For example, a single image to be rendered on a web page may involve the transfer of one or more Megabytes of data. While such images and fine detail make for a more aesthetic and sophisticated looking website, such content is not ideal for display on mobile devices which have smaller displays and slower data transfer rates. Additionally, website building applications typically utilize the full traditional display screen for displaying the web page under construction and panels of editing controls and widgets that can be dragged and dropped onto the web page. Traditional website building applications are therefore impractical, and depending on the device sometimes impossible, for use on a mobile device. A user operating a mobile device but desiring to create a website must typically wait until they have access to a desktop/laptop device with a traditional screen and high-bandwidth connection to the Internet to select and provision a website.

Finally, to complicate matters, the number of different types of mobile devices with differing operating systems, hardware configuration and capability, and communicating over different types of communication channels with different levels of transmission bandwidth (which on mobile devices is typically much lower than the bandwidth of "wired" lines), adds to the challenges faced by online website management service providers in providing a simple, fast, and intuitive online website creation and editing application.

Accordingly, what is needed is a simple, fast, and intuitive online website creation and editing application and service for allowing Internet users to create and publish a website from any and all of a traditional computing device, mobile device, or tablet device. A website should preferably be created, customized by the user, and published within a short period of time (e.g., 10-15 minutes). A user should further be able to perform all of the creation, customization, editing, and publishing on a mobile device, and the resulting website should look good across all different types of mobile devices.

SUMMARY OF THE INVENTION

Presented herein are techniques and tools for the assisted creation of a website optimized for mobile devices from a mobile device. Embodiments of the invention include a website building tool for building a website, which includes an application executing on a mobile device and communicating with a server and operating to present a graphical user interface on a display screen of the mobile device. The application is configured to present a user-configurable website template to a user of the mobile device and one or more controls responsive to user input for editing elements of the website template to create a user-customized website. The application queues and stores user edits to the website template in a local store on the mobile device and sends the queued user edits to the server for display rendering only upon receipt of a user input requesting preview or saving of the user edits.

Additional embodiments include at least a system including a server responsive to a request from a client device to serve a web page from which a website building tool may be launched and which downloads a design studio application to the client device for executing on the client device. The server is responsive to a selection indication received at the client device indicating a selection of a corresponding template by downloading a preview version of a user website based on the selected template to the client device. The design studio appli-

cation is configured to determine a device type of the client device, and to enable dynamic preview rendering of the user website in response to user modifications to the user website if the device type is determined to be a conventional computing device, and if the device type is determined to be a mobile device to cache the user modifications at the client device and to request preview rendering of the user website only upon request by the user.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete appreciation of this invention, and many of the attendant advantages thereof, will be readily apparent as the same becomes better understood by reference to the following detailed description when considered in conjunction with the accompanying drawings in which like reference symbols indicate the same or similar components, wherein:

FIGS. **1-87** are schematic diagrams of a client device, illustrating a number of graphical user interface screenshots that may be displayed to a user in an exemplary website creation flow;

FIG. **88** is a schematic block diagram of an exemplary system in which various embodiments of the invention operate;

FIG. **89** is a schematic graphical user interface data representation illustrating various graphical user interface pages presented on a client device and corresponding local website state object;

FIG. **90** is an operational diagram illustrating client-server actions and communications in accordance with an embodiment of the present invention;

FIG. **91** is a schematic diagram of the architecture of an example website; and

FIG. **92** is a schematic block diagram illustrating website assets database.

DETAILED DESCRIPTION

Although the present invention is described below by way of various embodiments that include specific structures and methods, embodiments that include alternative structures and methods may be employed without departing from the principles of the invention described herein.

In general, embodiments described below feature a network-based design application which allows a user to edit and configure features of a mobile-ready website and that executes on both a traditional computing device such as a desktop or laptop and on a mobile device such as a smartphone or tablet/pad device. The application is downloaded to the device by a server. The application detects the device type, and based on the device type, enables functionality. In an embodiment, the application allows dynamic display rendering as user-made selections and edits are made to a user website when the detected device type is a traditional device type. For mobile device types, the application instead locally stores user-made selections and updates to a user website and transmits the updates to the server as a batch only when a save or preview is requested by the user. In this way, rendering happens more quickly when the device on which the user is creating or editing the user website has, in general, more transmission bandwidth, whereas when the application detects that the website is being created and/or edited from a mobile device, the user updates to the user website are batched to reduce the amount of data passing to and from the server and thereby reducing perceived delay in rendering updates on the screen of the mobile device.

An introduction to Internet-related technology is helpful in understanding the present invention. The Internet is a vast and expanding network of computers and other devices linked together by various telecommunications media, enabling the various components to exchange and share data. Web pages and websites (collections of related web pages organized under a particular domain), accessible through Internet, provide information about numerous businesses, products and services, as well as education, research, and entertainment.

A resource that is attached to the Internet is often referred to as a "host." Examples of such resources include conventional computer systems that are made up of one or more processors, associated memory and other storage devices and peripherals, such as modems, networks interfaces and the like that allow for connection to the Internet or other networks. In most cases, the hosting resource may be embodied as hardware and/or software components of a server or other computer system that includes an interface module, which allows for some dialog with users and that may process information input by the user. Generally, such a server will be accessed through the Internet's graphical user interface, the World Wide Web, (e.g., via Web browsers) in the conventional fashion.

In order to facilitate communications between hosts, each host has a numerical Internet Protocol (IP) address. The IP address of a hypothetical host computer might be 69.17.223.11. Each host also has a unique "fully qualified domain name." In the case of the hypothetical host 69.17.223.11, the "fully qualified domain name" might be "computer.domain.com", the three elements of which are the hostname ("computer"), a domain name ("domain") and a top-level domain ("com"). A given host looks up the IP address of other hosts on the Internet through a system known as domain name service.

A page of a website is addressable by way of a Uniform Resource Locator, or "URL". A URL specifies three elements: (1) a transfer protocol; (2) a web server name or domain name; and (3) a path. The first element of the URL is a transfer protocol, most commonly "http" standing for hypertext transfer protocol, but others include "mailto" for electronic mail, "ftp" for file transfer protocol, and "nntp" for network news transfer protocol. The domain name indicates the name of the web server that stores the web page. The path indicates the location of web page on the named web server.

In order to access the Internet most users rely on computer programs known as "Web browsers." Commercially available Web browsers include such well-known programs as Microsoft Corporation's Internet Explorer®, Apple Inc.'s Safari®, Google Inc.'s Chrome®, and Mozilla Foundation's Firefox®, to name a few. If an Internet user desires to view a Web page hosted at www.domain.com, the Internet user might enter into a Web browser program the uniform resource locator (URL) "http://www.domain.com".

Once a URL is entered into the browser, the request is routed to a Domain Name System (DNS) server capable of matching the domain name specified in the URL to a corresponding IP address of a web server hosting the requested web page. Thus, the DNS server ultimately matches an alphanumeric name such as www.domain.com with its numeric IP address 69.17.223.11.

When a host receives a request from the Internet, it returns the data in the file pointed to by the request to the client making the request. Such data may make up a Web page, which may include a text message, sound, image, video, or a combination of such elements. A user can move between Web pages through the use of hyperlinks, which are links to other pages or locations on pages on the Internet.

A traditional website is a set of one or more web pages served by a web server at a particular domain name. A web page is typically a text document containing text and browser-interpretable instructions, such as the well-known HyperText Markup Language (HTML), eXtensible HyperText Markup Language (XHTML), Dynamic HTML (DHTML), Document Object Model (DOM), etc. A web browser running on a client machine requests a web page by specifying the Universal Resource Locator (URL) of the specific page, and upon receiving the requested page from the server, renders the page on the user's display screen by processing and executing the browser-interpretable instructions. Web pages may be linked to other web pages by way of hyperlinks placed within the page(s). Typically, a hyperlink specifies a URL of a web page, a position in the web page, or a resource accessible by the server serving the web page.

A typical website consists of a home page that is served when the URL specifies the domain name without specifying a particular path (e.g., www.mycompany.com). Additional pages belonging to a website may be specified by way of the path following the domain name in the URL, For example, a "Contact" web page for the www.mycompany.com website may be specified as "www.mycompany.com/Contact", where the path "/Contact" in the URL indicates the location at the web server of the "Contact" web page.

With reference now to FIG. **91**, a website may consist of a plurality of related web page **500**, **510**, **520**, **530**, **540**, each comprising a browser-renderable document (for example, an HTML document). In the example shown in FIG. **91**, a website includes a Home Page **500**, a Contact page **510**, an About Us page **520**, a Products page **530**, and one or more additional web pages **540**.

FIG. **92** depicts a structural diagram of a portion of a website assets database **204**. The website assets database **204** contains components and descriptions such as headers, navigational components, background images, inner background images, footers, layouts, color schemes, accent images, font schemes, template descriptions, and any type of component or scheme that may be used as a component in a web page. A web page may include a plurality of different components arranged (such as layouts, headers, footers, backgrounds, text components, and images) and/or applied (such as color schemes, font schemes, backgrounds, layouts, etc.) according to a page description (typically .html).

An integral component of the present invention is a computer server. Servers are computer programs that provide some service to other programs, called clients. A client and server communicate by means of message passing often over a network, and use some protocol, a set of formal rules describing how to transmit data, to encode the client's requests and/or responses and the server's responses and/or requests. The server may run continually waiting for client's requests and/or responses to arrive or it may be invoked by some higher-level continually running server that controls a number of specific servers.

With these concepts in mind, an embodiment of a system architecture of the present invention is presented in FIG. **88**. One or more server(s) **201** hosting one or more website management service(s) **202** are configured to allow operable communication with Internet-enabled client devices, including traditional computer devices **210***a* such as desktop and laptop computers as well as mobile devices **210***b* such as smartphones and Internet-enabled handheld devices (such as the Apple iPod Touch and other such devices). The server(s) **201** host a web-based website management service **202** which allows a user of a client device **210***a*, **210***b* to quickly create, edit, and publish a website. In an exemplary embodiment, the website created by the user is optimized for access by mobile devices. To this end, the server(s) **201** provides the website management service **202** with access to a database **204** of website assets which contain layouts, images, fonts, color schemes, etc. which are optimized for display on a mobile device. For example, the assets preferably include images of small or medium file size (e.g., less than 300 KB) and fonts that are widely available on many different types of mobile devices. In alternative embodiments, the website created by the user may be optimized for access by traditional computing devices such as desktop and laptop devices.

The website management service **202** is generally available to a client device **210***a*, **210***b* upon the device user navigating to a website hosted by the server(s) **201** and activating a control (for example, by clicking on a button or link displayed in a web page) to request the website management service **202**. Upon activation, the service **202** downloads a design studio application **215***a*, **215***b* (referred to generally hereinafter as **215**) to the requesting client device **210***a*, **210***b*, to execute in the browser **211***a*, **211***b* running on the client device.

The design studio application **215** detects the type of the client device. Preferably, at a minimum, the design studio application **215** determines whether the device type is a mobile device or a traditional computing device. Preferably, the design studio application **215** determines much more than merely whether the requesting device is a mobile device or a traditional device, including the device make and model, operating system, and hardware configuration. In an embodiment, the design studio application **215** reads the operating system configuration to determine the device type and operating system type and version. Other device type, system and hardware configuration may be obtainable by reading configuration information stored in one or more configuration locations in static device memory (e.g., device Read-Only Memory (ROM) or static Random Access Memory (RAM)).

As previously mentioned, the design studio application **215**, including the code and framework of the application **215**, is downloaded to the requesting device. In an embodiment, the design studio application **215** is one or more sets of JavaScript. The application **215** itself appears to the user as a set of web pages that naturally sequence from page to page. However, unlike a traditional navigation of a website, the design studio application **215** graphical user interface screens are not in fact web pages and are not served by the server(s) **201** when navigating from screen to screen. This significantly reduces the back and forth communication between the server(s) **201** and client device **210***a*, **210***b* during the creation and editing of a client user's website. Additionally, the design studio application **215** presents the design studio pages as a sequence of pages, thus appearing less like navigating the web and more like a wizard-type guided application running on the user's device **210***a*, **210***b*.

Of course, during the design of a user website from a client device **210***a*, **210***b*, there are points in the process when it is necessary to communicate with the server(s) **201**. For example, if the user desires to see a preview of the website or web page design, or desires to save edits made to the website or web page, the client must request the server to render the design and download the rendered design to the client device **210***a*, **210***b* for display. When transmission bandwidth is high, for example, when accessing the Internet from a traditional computing device over a high-speed T1 line, DSL or cable, the frequency of client-server communication and amount of data passed there between is generally not an issue in terms of the user experiencing any noticeable delay between communications. In this situation, user edits to the

website under design can be dynamically updated and previewed simultaneously in the user interface. However, when the transmission bandwidth is limited, for example when the user is creating the website from a mobile device **210***b* over a cell or wireless connection, frequent communication and passing of data between the client and server can result in a noticeable (e.g., undesirable) delay.

In general, the design studio application **215** detects whether the type of the client device is a traditional computing device (e.g., a desktop or laptop device) or a mobile device (e.g., smartphone, handheld, or tablet device), When the detected device type is one of a traditional computing device **210***a*, user selections and changes to a website which change the look or function of a web page or website are sent to the server for preview rendering dynamically (i.e., the preview is updated in realtime as the changes are made by the user). In contrast, when the detected device type is one of a mobile device **210***b*, the design studio application **215** maintains a cached queue of user updates which are sent to the server as a batch, and only at certain points in the website creation/editing process. In an embodiment, a batch of user updates is sent to the server(s) **201** only when a user requests a preview or to save the current changes. In this way, the website management service **202** can provide the desired type of experience depending on the type of device from which the user is accessing the service **202**. On traditional computing devices communicating over high bandwidth channels, the website management service **202** can provide a full dynamically updated preview of the web page under construction simultaneously with the user's input of design selections and input. On mobile devices communicating over more limited bandwidth channels, the website management service **202** can limit the interaction with the server(s) **202** to speed up the process by providing a preview image of the web page under construction only when asked for by the user or when the user requests the user input changes to be saved. By reducing the number of back-and-forth communications between the mobile device and server(s) **202** and preferably by using website assets optimized, especially in terms of data/file size, for mobile devices, the amount of time a user must spend to create, customize and publish a website can be significantly reduced.

In an embodiment, the design studio application **215** is one or more set(s) of JavaScript code that is downloaded by the server(s) **201** to a requesting client device **210***a*, **210***b*. In this embodiment, the design studio application **215** instantiates a JavaScript State Object (JavaState (JS) State Object) which represents and stores the state of the website under construction. Referring now to FIG. **89**, when the design studio application **215** is downloaded to the client device **210***a*, **210***b*, in an embodiment the design studio application **215** presents a gallery **300** of different template designs **301***a*, **301***b*, **301***n* from which the user may select using a graphical user interface control on the display device of the client device **210***a*, **210***b*. Upon receipt of a user's template selection, the design studio application **215** sends the identifier of the selected template to the server(s) **201**, which retrieves the template preview **310** (comprising a plurality of different website assets associated with the selected template) from the website assets database **204** and downloads the template to the client device **210***a*, **210***b*. The website template includes a default set of web pages, each with a default set of graphical and functional components, in a preferred embodiment, a functional preview **310** of the selected website template is downloaded at the time of selection to allow the user to interact with the preview to view the different pages of the selected template.

When a template is selected and downloaded to the user device **210***a*, **210***b*, a state object **305** (such as a JS State Object) is initialized to represent the website containing the default set of web pages and default set of graphical and functional components and other default selections and sample content. A user is then guided through the website customization and editing process by the design studio application **215** through a sequenced series of screens **320**, **330**, **340**, **350**, **360**, **370**, **380**, **390**. As the user makes selections and edits content and website configuration, corresponding fields or attributes of the JS State Object **305** representing various aspects and components of the user's website are correspondingly updated.

The design studio application **215** includes a preview control which allows the user to request a preview of the website under construction. The design studio application **215** also includes a save control which allows a user to request a save of the website under construction. In an embodiment, the website under construction may be stored in a user account storage area, for example in an account database **203**. Websites stored in the user account storage area are not published, and are therefore not accessible to the general public. The design studio application **215***a*, **215***b* also includes a publication control which transfers a copy of a saved website or web page to a Published Web Page storage area **205**. Each of the Account Database **203**, Website Assets Database **204** and Published Web Page storage areas **205** are non-transitory computer readable storage devices.

When a user is operating a traditional computing device **210***a*, whenever the user modifies or edits a component of the website under construction, the design studio application **215** sends the modification to the website management service **202** at the server **201**, where the web page under construction is re-rendered by the server **201** and sent back to the client device **210***a* for display in a preview area. In contrast, when a user is operating a mobile device **210***b*, whenever the user modifies or edits a component of the website under construction, the design studio application **215** updates the JS State Object **305** representing the website but does not automatically communicate with the website management service **202** at the server(s) **201**. Instead, user modifications are merely stored in the JS State Object. When the user requests a preview or a save operation, the design studio application **215** sends the JS State Object **305** (full Object or partial with only those portions which have changed states) to the website management service **202** at the server(s) **201** for rendering (on a preview request) or saving (on a save request). In an embodiment, the design studio application **215***a*, **215***b* sends a state synchronization request (for example, a JavaScript SyncState call), which synchronizes the JS State Object on the device with a corresponding state object maintained by the website management service **202** on the server(s) **201**. In this way, all user updates made up until the point in time when the user request a Preview are encapsulated in the JS State Object **305** on the device **210***b* and can by updated at the server simultaneously by one server request and with minimal data transfer.

It will be appreciated by those skilled in the art that the user interface of the design studio application **215** adapts the amount and type of its server interactions based on the type of device on which it is running. This device-type adaptability significantly improves the experience provided by the user of any given device by adapting the functionality of the website building application to the capabilities of the device on which it is running.

Referencing FIG. **89** again, in an embodiment the design studio application **215** includes a website editing control

home page **320** which includes controls **321-328** for activating editing of various components of the website, including a website header, a website footer, a website home page, and one or more additional website pages such as an About page, a Products page, a Services page, a Gallery page, a Contact page, etc. Each control **321-328**, when activated by the user, provides a corresponding functionality (such as displaying a Preview or a corresponding edit control page for a particular page in the website under construction. For example, the preview control **321** results in the display on the client device of a preview page **310**, which is an operational version of the current state of the user's website under construction, based on the current state of the JS State Object **305**. The header control **322** results in the display of a header editing control page **330**, which provides controls for selecting and/or editing the header title (control **331**), header image (control **332**), and any other header components. The footer control **323** results in the display of a footer editing control page **310**, which provides controls for selecting and/or editing the footer information, such as contributor crediting ("cc") (control **341**), a copyright notice (control **342**), links (control **343**), and any other footer components. Returning to the website editing control home page **320**, activation of control **324** brings up home page editing page **350**, control **325** brings up products editing control page **360**, control **326** brings up services editing control page **370**, control **237** brings up a gallery editing control page **380**, and control **238** brings up a contact editing control page **390**. Additional control associated with additional pages for configuring and editing components of additional associated pages may be provided.

FIG. **90** is an operational diagram illustrating client-server actions and communications in accordance with an embodiment of the present invention. As illustrated, a client brings up a browser to access the Internet and activates the service by clicking on or entering the URL of the service **202** (step **401**). By clicking on or entering the URL of the service, the request for the page associated with the URL is sent to a server **201** which downloads a design studio application **215** into the browser **215** of a client device **210** (step **402**). The design studio application **215** executes in the browser of the client device (step **403**). The design studio application **215** detects the device type of the requesting device (step **404**). If the device type is a traditional computing device dynamic updates are enabled, otherwise updates are cached (step **405**). The design studio application **215** requests from the server(s) **201** a gallery **300** of images of templates **301***a*, **301***b*, . . . , **301***n* (each template image having associated therewith a selection control) (step **406**). A server **201** obtains the requested gallery **300** and sends to the requesting client device **210** (step **407**). The client device receives and displays the gallery **300** (step **408**), receives a user selection of a particular template (by way of the user activating the selection control associated with the template image representing the desired template) (step **409**) and requests the selected template from the server step **410**). The server **201** retrieves the selected template and downloads it to the client device (step **411**). The client device **210** receives the template from the server and displays an operational preview along with a number of editing controls (step **412**).

The design studio application **215** monitors for user input. Each time a user selects an editing control (step **413**), a set of edit features associated with the selected edit control are displayed (step **414**). For example, if the edit control is a control associated with editing the website header, the edit control when activated results in the display of a set of additional controls for editing features such as the title, image and other features of the header. User edits made using the selected edit control are received at the client (step **415**). If dynamic updates are enabled, the updates corresponding to the user edits are sent by the client to the server for dynamic rendering, otherwise the corresponding updates are stored locally for later batched updating (step **416**). The server may receive dynamic updates from the client device if dynamic updates are enabled, and if so, re-renders the web page or website based on the received updates, sending the re-rendered page/website to the client device (step **417**). The user may continue to configure and edit the website template at will (repeating steps **413** through **417** as appropriate).

Eventually, the user may select the preview button or a save button (step **418**). If dynamic updates have been disabled (due to mobile device type), the stored queued updates are sent as a batch to the server for rendering (step **419**). The server receives the preview or save request, re-renders the website or web page based on the received updates, and sends the preview to the client device (if a preview request) or saves the state of the website at the server (if a save request) (step **420**). The client receives the preview (step **421**), displays the current page and caches the other pages (step **422**).

The user may request publication of the website. When the design studio application **215** receives user input indicating desire to publish the website as is, (step **423**), the request is sent to the server (step **424**), and the server **201** publishes the current state of the website to a published web page database (step **425**).

FIGS. **1-87** show a number of exemplary example display screen outputs that may be presented to a user of a mobile device or traditional computing device. FIG. **1** includes FIGS. **1**A and **1**B which each show an example introductory page **2***a*, **2***b* that is hosted by a server and that may be displayed to the user upon navigation to the introductory page using a browser executing in either a mobile device **1***a* or on a traditional computing device **1***b* such as a laptop or desktop computer. As indicated, the introductory screen **2***a*, **2***b* includes welcome or explanatory text **4**, and a control **3**, such as a button or link, to launch the creation/editing of a website. Notably, the creation and/or editing of a website can be performed from either a traditional computing device **1***b*, or from a mobile device **1***a*. To create a new website, a user may click on the control **3** which triggers the download of the design studio application **215** to the requesting device **210***a*, **210***b*.

The design studio application **215** detects the device type and presents a graphical user interface suitable to the device type. The graphical user interface presented preferably utilizes the full available screen real estate based on the device type. If the detected device type is a traditional device such as a laptop or desktop, the display screen aspect ratio is typically (but not limited to) 5:4 (width to height), 4:3, 5:3, 32:15, 128:75, with varying resolutions such as (but not limited to) 1280×1024 pixels, 640×–480 pixels, 800×480 pixels, 800×600 pixels, 1024×480 pixels, 1024×600 pixels, 1024×768 pixels, Etc. If the detected device type is a mobile device such as a smartphone, the screen aspect ratio is typically (but not limited to) 2:3, 3:4, or 4:5 with the resolution typically (but not limited to) 320×480 pixels, 240×320 pixels, or 480×800 pixels.

FIGS. **2-87** show representative gui screenshots when a user creates a software from a mobile device **1***a*. It is to be understood that the graphical user interface will generally occupy most if not all of the available screen space specific to the particular device, and that since a traditional device type includes a screen size the is typically wider than it is tall, the preview may be concurrently displayed with the editing controls in the graphical user interface. Conversely, since the screen size of a mobile device is typically taller than it is wide,

the edit controls are displayed as different screens of the application separate and apart from the operational preview (which is displayed alone on a different graphical user interface screen of the application). The remainder of the description of the graphical user interface of the application **215** will be described in the context that the detected device type was a mobile device **210***b*.

As seen in FIG. **2**, the design studio application **215** downloaded to the device **210***b* displays a graphical user interface **10** comprising a plurality of controls **11**, **12**, **13**, **14**. Control **11** is configured to launch a website design studio application for selecting and editing a website template. Control **12** includes a textbox for receiving user text input corresponding to a website domain name to which the website will be, or is, associated. Control **13** is a control for logging in to the website management service **202** for editing an existing website. Control **14** allows a user to recover a password for logging in to edit the website.

When the user clicks on the website creation control **11**, the design studio application **215** displays a graphical user interface screen **15**, shown in FIG. **3**, including a control **16** allowing a user to select a template category. For example, the template categories may be based on a business type, and when activated by the user clicking on the control **16**, the design studio application **215** may display further selection controls **17**, **18** associated with different categories of business type, as illustrated in FIG. **4**. The user may select a category control, for example control **17**, to display a gallery of template design choices **18***a*, **18***b*, as illustrated in FIG. **5**. Upon user selection of a particular template design, for example, template design **18***b*, the design studio application **215** requests the selected template from the website management service **202** on the server **201**, which returns an operational preview **22** of the selected template. The preview **22** is preferably an operational version of the website design of the selected template, containing a plurality of web pages and associated web page assets including sample text, and one or more images, a color scheme, a font scheme, page layouts associated with the selected template. The preview **22** comprises a browser-renderable page which includes operational links to other browser-renderable pages of the previewed website template. The preview page **22** is rendered within a graphical user interface preview page **20** which includes the previewed web page **22** along with a control **21** for moving to the website editing control home page, and a control **19** to close the preview **22** to return to the graphical user interface screen that was previously being viewed.

As illustrated in FIGS. **6** through **8**, which show the preview **22** of the home page when the display shows the top of the page **22** (FIG. **6**), the middle of the page (FIG. **7**), and the bottom of the page (FIG. **8**), viewed by the user by scrolling the page using a scroll control **6** on the graphical user interface. As shown, the preview **22** itself includes a header area having a website title **23** and a header image **24**. The preview **22** further includes home page content **25** and **26**, best viewed in FIG. **7**, and links **27** through **32** to other preview pages of the preview website. The preview **22** also includes a footer area, best seen in FIG. **8**, including one or more of a copyright notice **33**, a message **34**, etc.

The preview **22** is operational. Thus, if the user clicks on one of the page links **27** through **32**, the preview page associated with the selected link is then displayed in the preview area **20** of the graphical user interface. Thus, for example, if the user clicks on the Contact link **32**, shown in FIG. **8**, the preview Contact page is loaded into the preview area **20** of the graphical user interface, as illustrated in FIG. **9**.

When the user desires to edit one or more components of the website, the user clicks on the edit content control **21**, causing the design studio application **215** to display the website editing control home page **36** on the display of the device, as shown in FIG. **10**. As illustrated, the website editing control home page **36** includes an information tab **39** which includes a plurality of controls **41**-**49** (FIGS. **10** and **11**) to respectively bring up the editing controls for different sections or pages of the website. An options tab **40** (FIG. **10**) is included, discussed hereinafter. The website editing control page **36** also includes a control **38** (FIG. **10**) for going back to the page(s) for changing the theme (comprising the template, colors, and font scheme). Additionally, the website editing control page **36** includes a control **37** (FIG. **10**) for saving the present state of the website.

FIG. **11** shows the cursor **5** clicking on the header control **42**, which results in the display of the header edit control page **50**, shown in FIG. **12**, which includes a header image editing control **51**, a website title editing control **52**, and a website naming control **53**. When the user clicks on the website title editing control **52**, a title text box **53** is displayed, as shown in FIG. **13**, along with a text entry mechanism **54**, such as a touch keyboard, allowing the user to enter the text which shall serve as the website title or Header text (FIG. **14**). In general, the Header appears at the top of every web page in the website, although this is not necessarily required if the template is designed otherwise.

Returning to the header edit control page **50**, when the user clicks on the edit image control **55** in FIG. **14**, one or more display screens may be displayed or sequenced through to allow a user to search, select, and/or upload an image to be used as the header image. Depending on the functionality of the particular device **210**, the user may or may not be allowed to upload an image. Image upload capability may depend on the capability and configuration of the particular device. Generally, traditional computing devices can upload images, whereas image uploading by a mobile device may depend on the type of transmission channel or protocol.

FIG. **15** shows the user searching for images associated with the word "sunset" in a 3rd party image gallery service such as Flickr. Images may be obtained from a Gallery maintained by the website management service **202** (gallery tab **57**), or may be uploaded (if uploading is enabled) (upload tab **58**), or found by typing a Universal Resource Locator (URL) (URL tab **59**), or by accessing a 3rd party service, for example Flickr tab **60**. The search control includes a text box **61** for receiving user inserted text, inserted by ways of the text entry control **54**. As illustrated in FIG. **16**, upon entry of a keyword (in this example, the word "sunset") as entered into the search text box **61**, a gallery **62** of images tagged to the keyword is displayed. The user can select a particular image **63** by clicking on the thumbnail image in the gallery **62** with the cursor **5** to view the image in a larger format and in higher resolution than the thumbnail image, for example as shown in FIG. **17**. If the user is satisfied with the selection, the user indicates this by clicking on the select button **64**, which causes the design studio application **215** to automatically crop the image to the size of the header image container and load the cropped image **63** into the header image container **24**, as shown in FIG. **18**. If the user does not prefer the automatic cropping performed by the design studio application **215**, the user can select a crop tool **64**, as indicated where the cursor **5** is clicking in FIG. **19**, which brings up a cropping control page **65**, shown in FIGS. **20**-**22**. The cropping control includes instructions **66** which indicate to the user how to change the current cropping of the image **63** which is presented in image area **68**. For example, in the illustrative embodiment, the cropping controls include

arrow buttons **69***a* through **69***d* for moving the position of the image relative to a cropping indicator. The cropping indicator has the same aspect ratio as the header image container, and any image content located within the cropping indicator will appear as the header image. FIG. **21** shows the image position controls **69***a*-**69***d*, along with image zoom controls **70***a*, **70***b*. When the user is satisfied with the cropping of the image, as indicated at **63***a* in FIG. **22**, the user clicks on the Done button **67**. The header editing control then displays the current state of the header (see FIG. **23**), including the selected header image **63***a* and selected website title **53**. When done, the user can request a preview **20**, shown in FIG. **24**, which shows the updates applied to the header.

Returning to the website editing control page **36**, shown in FIG. **25**, the header control **42** includes a completion indicator **72** indicating that the header has been edited and is complete. The user can click on another section control **43** through **48** to continue editing additional sections, or can made changes to thematic aspects of the website by clicking on the Theme control **71**.

FIG. **26** shows the graphical user interface displayed to the user upon selection of the Theme control **71**, and FIG. **27** shows the display upon selection by the user of the Colors tab **80**. The Colors tab **80** displays a plurality of different color schemes and associated controls **81***a*-**81***f*. Upon selection of a control **81***c* of a different color scheme, and then request of a preview, the preview **22** is displayed to the user, as shown in FIG. **28**, which shows the website with the updated color scheme.

Returning to the website editing control page **36**, shown in FIG. **29**, the user can click on another section control, for example on the footer control **43** as indicated by the position of the cursor **5** on the control **43**. The footer editing control page **82** is then presented to the user, as shown in FIG. **30**. In one embodiment, the footer controls include a Links control **83**, which when activated as indicated in FIG. **31**, brings up controls **84**-**86** for fuming on or off various respective social media control links (e.g., Facebook, Twitter, Blogger). Social media account information can be entered into text box controls **87** and **88**, using the text entry control **54**, as shown in FIG. **32**. Returning to the footer editing control page **82** in FIG. **33**, the user can also activate a looter notice control **89**, which may have an associated text box **90**. The user may enter text in the box **90** using the text entry control **54**.

Upon completion of the footer editing, the user can again request a preview **20**, shown in FIG. **34** where one can view the updated footer containing the copyright notice **91** and links **92** and **93**. The preview may also include a progress indicator **94**, shown in FIG. **35**.

Returning to the website editing control page **36** in FIG. **36**, the footer completion indicator **73** is activated, indicating that the footer is complete. The user can then select the control of another section, for example control **44** associated with the Home page, which brings up the home page editing control page **95** shown in FIG. **37**. The home page control page **95** includes a splash image section **96** with an associated image **97** contained therein, a removal control **98** for removing the current image associated with the splash image section **96**, and an editing control **99** for changing the image in the splash image area. Upon selection of the editing control **99**, the user may be presented with the image source tabs, including the Gallery tab, the Upload tab, the URL tab and the 3rd party image gallery service tab (in one embodiment, a Flickr tab). In FIG. **38**, the user is viewing the current image and the associated keyword and can select the current image or, as indicated in FIG. **39**, place a different keyword (for example, the word "cruise" as indicated in the text box **61**) in the search control **61**, and activate the search to bring up a gallery of images associated with the new keyword (shown in FIG. **40**). The user can then select the desired image **100**, which results in display of a higher resolution image, as shown in FIG. **41**. If the user is satisfied with the image, the user can click on the select button **64**, and the design studio application **215** automatically crops the image (indicated by indicator **101** in FIG. **42**) and uploads the image (indicated by indicator **102** in FIG. **43**). The cropped image is then displayed to the user in the splash image area **96** of the home page editing control page **95**, shown in FIG. **44**.

The user may also edit the home page content **25** by clearing the content using control **104** and/or clicking on the edit control **103**. FIG. **45** shows the edit content control **107**, which includes a markdown language to allow a user to enter text formatting using text-based tagging. For example, in the embodiment shown, header formatting is indicated by tagging the text between dashes "–", italicized text is indicated by tagging the text between slashes "/", bolded text is indicated by tagging text between plus signs "+", and bulleted list items are indicated by tagging items between asterices "*". FIG. **45** shows the syntax explanation **106**, along with sample content text **105**. Text in the text area **105** can be changed using the text edit control **54**, as illustrated in FIGS. **46** and **47**.

Returning to the website editing control page **36** in FIG. **48**, the home page indicator **74** is enabled to indicate that the home page is complete. The completed home page can be previewed, as indicated in FIGS. **49** and **50**, which show the updated splash image and home page content.

The selection and order of the web pages on the website can be managed by clicking on a page management control **115** (see FIG. **53**), which displays a page management tool **109**. In an embodiment shown in FIG. **51**, various home pages can be turned on or off using associated controls **110**-**114**. By turning off more pages, the progress indicator **94** is updated to reflect that the website is closer to being completed.

Returning to the website editing control page **36** in FIG. **53**, the user can edit the products page by selecting control **45**, which brings up the products editing control page **116** shown in FIG. **54**. The products editing control page **116** includes a sample itemized list **117** of product items, an editing control **119**, an add product control **120**, and a remove item control **118**. As with other sections of the design studio application **215**, the editing control **119** allows text entry using the markdown language and text entry control **54**. A new item entry can be added by selecting the add product control **120**, and entering the product description, as illustrated in FIG. **55**. The added item appears in the products editing control page as **117***a* in FIG. **56**. Items in the product list can be moved up or down in the list relative to the other items in the list using controls, as illustrated in FIGS. **57** and **58**. Items in the list can be removed from the list using the remove item control **118**, as illustrated by the removal of item **117***b* from the list of items **117***a*-**117***c* in FIGS. **58** and **59**.

FIG. **60** shows the website editing control page **36** after completion of the products page and during selection of the Gallery editing control **46**. FIG. **61** shows the Gallery editing control page **121**, which shows the current list of website gallery photos **122***a*, **122***b*, **122***c* that will appear on the website Gallery page. The user can add a Gallery photo using the add gallery item control **123**, which operates similarly to the addition of images elsewhere in the design studio application **215** and is illustrated in FIGS. **62**-**65**. In particular, the Gallery tab can be selected to bring up thumbnails **124***a*, **124***b* of images currently in the gallery associated with the user's account, as well as any previously stored image crops **125***a*, **125***b*, **125***c*. Once a new gallery item is added using the add

gallery item control **123**, the new gallery item **122***d* shows up on the Gallery editing control page **121**, as shown in FIG. **65**. The Gallery editing control page **121** also includes a text editing control which allows the user to enter text associated with a selected Gallery item (shown as **122***d*). In an embodiment, the user enters text into a Gallery item textbox **126** using the text entry control **54** as shown in FIG. **67**. When the user is done editing the text associated with the item, the updated text appears associated with the item **122***d* in the Gallery editing control page **121**, as illustrated in FIG. **68**.

Returning again to the website editing control page **36** in FIG. **69**, a Gallery completion indicator **76** appears next to the Gallery edit control **46** to indicate that the Gallery is complete. Next, the user can click on the Contact control **47** to begin editing the Contact editing control page **127**, shown in FIG. **70**. The Contact editing control page **127** includes a number of different text entry controls **128***a*, **128***b*, **129***a*, **129***b*, for receiving phone, alternate phone, sms phone and alternate sms phone numbers. The text (including numbers) may be entered using the text entry control **54**, shown in FIG. **71**. Contact address(es) can be entered into address text entry controls **130***a*-**130***e*, shown in FIGS. **72** and **73**, again using the text entry control **54**. The user entered address may optionally be validated by an address validation service, which may be activated by clicking on a Validate Address control **131**. The Contact editing control page **127** may also include a map **132**, shown in FIGS. **73** and **74**, which may be automatically uploaded and inserted into the page by a 3rd party mapping service.

A preview **20** look at the website shows the updated address information applied to the Contact page, shown in FIG. **75**. Upon completion of the Contact page, all enabled pages are complete as indicated in FIG. **76**. Additional pages can be added using the Add/Remove Pages control **115**, which brings up the page management control **109** (FIG. **51**).

The user may select additional options, available from the Options tab **133**, shown in FIG. **77**. Example options include social media, analytics, and search engine optimization (SEO) controls **135**, **136**, **137**, respectively.

FIG. **78** shows an example set of controls for enabling social media functionality. The user may choose to add a Facebook button (control **141**), a Twitter button (control **142** with address control **143**), a Google+ button **144**, and/or other social media buttons. FIG. **79** shows the Options tab **133** with a status indicator indicating the social media options have been completed. FIG. **80** shows an example analytics page **145**, which includes a control **146** for entering an analytics service account information, and a link **147** to sign up for analytics if the user does not already have an account.

FIG. **81** shows the user saving the website by clicking on the Save button **139**. FIGS. **82**-**85** shows the user requesting publication of the website. A Publish page **150** includes a control **151** for entering a domain name, controls **152** and **153** for entering a user name and a password, a control **154** for entering an email address, a Publish Online checkbox **155**, and a Publish request control **156**. As illustrated in FIG. **83**-**85**, entry of text into any and all text entry controls **151**-**154** can be facilitated using text entry control **54**. FIG. **86** shows a confirmation welcome message **161** indicating that the current website, indicated by preview **160**, has just been published. FIG. **87** shows the published web page upon navigation to the website using the URL.

As will be appreciated by those skilled in the art, the order and presentation of the graphical user interface pages displayed by the design studio application **215** may vary in design and implementation without departing from the spirit and scope of the claims presented hereinafter.

Server(s) **201** and devices **210***a*, **210***b* may include any type of processor-based system on which processes and methods consistent with the disclosed embodiments may be implemented. For example, all computing devices described herein, including devices **210***a*, **210***b*, server(s) **201**, etc. may include one or more hardware and/or software components configured to execute software programs. Such computing devices may include one or more hardware components such as one or more processors, random access memory (RAM) module(s), read-only memory (ROM) module(s), non-transitory computer readable storage, database(s), one or more input/output (I/O) devices, and interface(s). System(s) **201**, **210***a*, **210***b* may include one or more software components such as a computer-readable medium including computer-executable instructions for performing methods consistent with certain disclosed embodiments. One or more of the hardware components listed above may be implemented using software. For example, storage may include a software partition associated with one or more other hardware components of the system(s) **201**, **210***a*, **210***b*, System(s) **201**, **210***a*, **210***b* may include additional, fewer, and/or different components than those listed, above, as the components listed above are exemplary only and not intended to be limiting.

The system processor(s) are each configured to execute instructions and process data to perform one or more functions associated with the respective system(s) **201**, **210***a*, **210***b*. The processor(s) may be communicatively coupled to RAM, ROM, storage, I/O devices, and other hardware. The processor(s) may be configured to execute sequences of computer program instructions to perform various processes, which will be described in detail below. The computer program instructions may be loaded, into RAM for execution by the processor(s).

Storage device(s) may include any type of mass storage device configured to store information that the processor(s) may need to perform processes consistent with the disclosed embodiments. For example, storage device(s) may include one or more magnetic and/or optical disk devices, such as hard drives, CD-ROMs, DVD-ROMs, or any other type of mass media device.

Database(s) may include one or more software and/or hardware components that cooperate to store, organize, sort, filter, and/or arrange data used by the processor(s). The processor(s) may access the information stored in database **115** for comparing the past recommended website improvements to the current state of a website.

I/O devices may include one or more components configured to communicate information with a user associated with the processor(s). For example, I/O devices may include a console with an integrated keyboard and mouse to allow a user to input parameters associated with the processor(s), I/O devices may also include a display, such as a monitor, including a graphical user interface (GUI) for outputting information. I/O devices may also include peripheral devices such as, for example, a printer for printing information, a user-accessible disk drive (e.g., a USB port, a floppy, CD-ROM, or DVD-ROM drive, etc.) to allow a user to input data stored on a portable media device, a microphone, a speaker system, or any other suitable type of interface device.

The results of received data may be provided as output from the processor(s) to I/O device for printed display, viewing, and/or further communication to other system devices. Such output may include, for example, evaluation reports, recommended changes to a website, required changes to a website, timelines for improving a website, and other data

consistent with evaluating websites. Output from the processor(s) can also be provided to database and to other processor(s).

The processor(s) may connect to Interface(s), which may include one or more components configured to transmit and receive data via a communication network, such as the Internet, a local area network, a workstation peer-to-peer network, a direct link network, a wireless network, or any other suitable communication platform. In this manner, clients **210***a*, **210***b* and server **201** may communicate through the use of a network architecture. The network architecture may include, alone or in any suitable combination, a telephone-based network (such as a PBX or POTS), a local area network (LAN), a wide area network (WAN), a dedicated intranet, and/or the Internet. Further, the network architecture may include any suitable combination of wired and/or wireless components and systems. For example, an Interface may include one or more modulators, demodulators, multiplexers, demultiplexers, network communication devices, wireless devices, antennas, modems, and any other type of device configured to enable data communication via a communication network.

A browser **215***a*, **215***b* executes in a system such as a client device **210***a*, **210***b*. A client user may use the browser **210***a*, **210***b* to access the website management service **202** and create and/or edit a website. In particular, the website is a mobile-ready website, having assets and functionality targeted for display and operation on a mobile device. To this end, website assets used to compose the website are small in size (less than 500 MB), and sized to fit on a mobile device display.

Those skilled in the art will appreciate that all or part of systems and methods consistent with the present disclosure may be stored on or read from other non-transitory computer-readable storage. Each device **210***a*, **210***b* and server(s) **201** may include one or more computer-readable storage medium(s) having stored thereon machine executable instructions for performing, among other things, the methods disclosed herein. Exemplary computer readable storage may include secondary storage devices, such as hard disks, floppy disks, and CD-ROM; a carrier wave tangibly embodied on a storage device; or other forms of computer-readable memory, such as read-only memory (ROM) or random-access memory (RAM).

Furthermore, one skilled in the art will also realize that the processes illustrated in this description may be implemented in a variety of ways and include multiple other modules, programs, applications, scripts, processes, threads, or code sections that may all functionally interrelate with each other to accomplish the individual tasks described above. For example, these programs modules may be implemented using commercially available software tools, using custom object-oriented code written in the C++ programming language, using applets written in the Java programming language, or may be implemented as with discrete electrical components or as one or more hardwired application specific integrated circuits (ASIC) custom designed for this purpose.

The described implementation may include a particular network configuration but embodiments of the present disclosure may be implemented in a variety of data communication network environments using software, hardware, or a combination of hardware and software to provide the processing functions.

Although this preferred embodiment of the present invention has been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims. It is also possible that other benefits or uses of the currently disclosed invention will become apparent over time.

What is claimed is:

1. A client device, comprising:

a display screen;

one or more user input devices for entering user input;

one or more computer-readable program storage media having stored thereon a website building application for building a website from the client device, the website building application comprising processor-executable instructions;

one or more computer-readable data storage media;

one or more processors executing the instructions of the website building application to

(a) communicate with a remote server which renders a user-configurable website template,

(b) present a graphical user interface on the display screen, the graphical user interface presenting to a user of the client device

the rendered user-configurable website template and one or more controls for editing elements of the website template to create a user-customized website, the controls responsive to user input from the one or more user input devices

to generate one or more of user edits and synchronization-type requests,

(c) determine whether the client device is a first device type or a second device type,

(d) if the client device is of the first device type, dynamically send to the server updates corresponding to user edits as user updates are generated by at least one of the controls for rendering of an updated user-configurable website template by the server, and receive and display the server-rendered updated user-configurable website template on the display screen, and

(e) if the client device is of the second device type, queue and store the user edits in the data storage media and, only upon generation by at least one of the controls of a synchronization-type request, batch a plurality of the queued user edits, and send to the server a batch request to process updates corresponding to the batched queued user edits and render a batch-updated user-configurable website template by the server, and receive and display the server-rendered batch-updated user-configurable website template on the display screen.

2. The client device of claim **1**, wherein the website building application is configured as a guided wizard comprising a plurality of different pages wherein each page allows a user of the mobile device to customize or edit at least one different feature of the website.

3. The client device of claim **1**, wherein the website building application is downloaded from the server.

4. The client device of claim **1**, wherein at least one of the controls comprises a syntactic language format translation tool which allows a user to enter text formatting syntax directly into a text box, which is translated by the syntactic language format translation tool into a Rich text display when rendered.

5. The client device of claim **4**, wherein the syntactic language format translation tool parses different formatted sections of text into respective different fields, and presents the different fields in the graphical user interface as separately editable.

6. The client device of claim **5**, wherein one or more of the controls allow the user to reposition the separately editable fields relative to each other.

7. A server device system, comprising:

computer-readable non-transitory data storage media storing therein a website template and a website building application for building a website from the client device, the website building application comprising processor-executable instructions which, when executed by one or more processors of a client device direct the processors to

(a) communicate with a remote server which renders a user-configurable website template,

(b) present a graphical user interface on a display screen of the client device, the graphical user interface presenting to a user of the client device the rendered user-configurable website template and one or more controls for editing elements of the website template to create a user-customized website, the controls responsive to user input from the one or more user input devices to generate one or more of user edits and synchronization-type requests,

(c) determine whether the client device is a first device type or a second device type,

(d) if the client device is of the first device type, dynamically send to the server updates corresponding to user edits as user updates are generated by at least one of the controls for rendering of an updated user-configurable website template by the server, and receive and display the server-rendered updated user-configurable website template on the display screen, and

(e) if the client device is of the second device type, queue and store the user edits in computer-readable data storage media of the client device and, only upon generation by at least one of the controls of a synchronization-type request, batch a plurality of the queued user edits, and send to the server a batch request to process updates corresponding to the batched queued user edits and render a batch-updated user-configurable website template by the server, and receive and display the server-rendered batch-updated user-configurable website template on the display screen;

one or more computer-readable program storage media having stored thereon a website building application server, the server comprising computer-executable instructions operable to

serve the website building application to a client device,

render the website template for display on a client device and serve to the client device the rendered website template,

receive from the client device one or more updates corresponding to user edits to the website template, apply the received updates to the website template, render the updates website template, and serve to the client device the rendered updated template.

8. The server device of claim 7, wherein the first device type is a non-mobile device type, and the second device type is a mobile device type.

9. The server device of claim 7, wherein the synchronization-type request comprises a request for a preview of the user-configurable website template updated with the user edits, or a request to save the user edits to the user-configurable website template.

10. An article of manufacture, comprising:

one or more non-transitory computer-readable program storage media having stored thereon a website building application for building a website from the client device, the website building application comprising processor-executable instructions which, when executed by one or more processors of a client device direct the processors to

(a) communicate with a remote server which renders a user-configurable website template,

(b) present a graphical user interface on a display screen of the client device, the graphical user interface presenting to a user of the client device the rendered user-configurable website template and one or more controls for editing elements of the website template to create a user-customized website, the controls responsive to user input from the one or more user input devices to generate one or more of user edits and synchronization-type requests,

(c) determine whether the client device is a first device type or a second device type,

(d) if the client device is of the first device type, dynamically send to the server updates corresponding to user edits as user updates are generated by at least one of the controls for rendering of an updated user-configurable website template by the server, and receive and display the server-rendered updated user-configurable website template on the display screen, and

(e) if the client device is of the second device type, queue and store the user edits in computer-readable data storage media of the client device and, only upon generation by at least one of the controls of a synchronization-type request, batch a plurality of the queued user edits, and send to the server a batch request to process updates corresponding to the batched queued user edits and render a batch-updated user-configurable website template by the server, and receive and display the server-rendered batch-updated user-configurable website template on the display screen.

11. The article of manufacture of claim 10, wherein the first device type is a non-mobile device type, and the second device type is a mobile device type.

12. The article of manufacture of claim 10, wherein the synchronization-type request comprises a request for a preview of the user-configurable website template updated with the user edits, or a request to save the user edits to the user-configurable website template.

13. The client device of claim 1, wherein the first device type is a non-mobile device type, and the second device type is a mobile device type.

14. The client device of claim 1, wherein the synchronization-type request comprises a request for a preview of the user-configurable website template updated with the user edits, or a request to save the user edits to the user-configurable website template.

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