

## (12) United States Patent

## Spiegel et al.

#### US 9,113,301 B1 (10) **Patent No.:**

#### (45) **Date of Patent:** Aug. 18, 2015

#### (54) GEO-LOCATION BASED EVENT GALLERY

- Applicant: Snapchat, Inc., Venice, CA (US)
- Inventors: Evan Spiegel, Venice, CA (US); Robert

Murphy, Venice, CA (US); Nick Allen,

Venice, CA (US)

- Assignee: Snapchat, Inc., Venice, CA (US)
- (\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

- Appl. No.: 14/304,855
- (22) Filed: Jun. 13, 2014
- (51) Int. Cl.

H04W 24/00 (2009.01)H04W 4/02 (2009.01)

- (52) U.S. Cl. CPC ...... *H04W 4/021* (2013.01)
- (58) Field of Classification Search USPC ...... 455/456.3 See application file for complete search history.

#### (56)**References Cited**

#### U.S. PATENT DOCUMENTS

5,999,932	A	12/1999	Paul
6,154,764	A	11/2000	Nitta et al.
6,167,435	A	12/2000	Druckenmiller et al.
6,204,840	B1	3/2001	Petelycky et al.
6,216,141	B1	4/2001	Straub et al.
6,310,694	B1	10/2001	Okimoto et al.
6,484,196	B1	11/2002	Maurille
6,665,531	B1	12/2003	Soderbacka et al.
6,724,403	B1	4/2004	Santoro et al.
6,757,713	B1	6/2004	Ogilvie et al.
6,898,626	B2	5/2005	Ohashi
7,124,164	В1	10/2006	Chemtob

7,149,893	B1	12/2006	Leonard et al.
7,203,380	B2	4/2007	Chiu et al.
7,356,564	B2	4/2008	Hartselle et al.
7,519,670	B2	4/2009	Hagale et al.
8,001,204	B2	8/2011	Burtner et al.
8,112,716	B2	2/2012	Kobayashi
8,276,092	B1	9/2012	Narayanan et al.
8,279,319	B2	10/2012	Date
8,312,086	B2	11/2012	Velusamy et al.
8,312,097	B1	11/2012	Siegel et al.
8,379,130	B2	2/2013	Forutanpour et al.
8,405,773	B2	3/2013	Hayashi et al.
8,418,067	B2	4/2013	Cheng et al.
8,471,914	B2	6/2013	Sakiyama et al.
8,560,612	B2	10/2013	Kilmer et al.
8,744,523	B2	6/2014	Fan et al.
8,775,972	B2	7/2014	Spiegel
8,788,680	В1	7/2014	Naik
8,797,415	B2	8/2014	Arnold
8,856,349	B2	10/2014	Jain et al.
002/0047868	A1	4/2002	Miyazawa
002/0122659	A1	9/2002	McGrath et al.

#### (Continued)

#### OTHER PUBLICATIONS

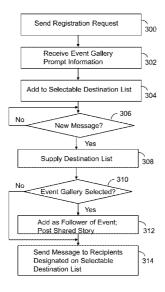
iVisit, "iVisit Mobile Getting Started", Dec. 4, 2013, iVisit, pp. 1-16. (Continued)

 ${\it Primary \, Examiner - Mazda \, Sabouri}$ (74) Attorney, Agent, or Firm - Schwegman Lundberg & Woessner, P.A.

#### (57)ABSTRACT

A computer implemented method includes receiving a message and geo-location data for a device sending the message. It is determined whether the geo-location data corresponds to a geo-location fence associated with an event. The message is posted to an event gallery associated with the event when the geo-location data corresponds to the geo-location fence associated with the event. The event gallery is supplied in response to a request from a user.

## 8 Claims, 5 Drawing Sheets



# US 9,113,301 B1 Page 2

(56)	Referen	nces Cited	2012/0113272 A1	5/2012	
II S	DATENT	DOCUMENTS	2012/0131507 A1 2012/0131512 A1	5/2012	Sparandara et al. Takeuchi et al.
0.5	. FAILINI	DOCUMENTS	2012/0143760 A1		Abulafia et al.
2002/0144154 A1	10/2002	Tomkow	2012/0166971 A1		Sachson et al.
2003/0016247 A1		Lai et al.	2012/0169855 A1 2012/0173991 A1	7/2012	Oh Roberts et al.
2003/0052925 A1 2003/0164856 A1		Daimon et al. Prager et al.	2012/01/3991 A1 2012/0184248 A1		Speede
2004/0027371 A1		Jaeger	2012/0200743 A1	8/2012	Blanchflower et al.
2004/0111467 A1	6/2004	Willis	2012/0210244 A1		deFrancisco Lopez et al. Mate et al.
2004/0203959 A1 2004/0243531 A1	10/2004 12/2004	Coombes	2012/0212632 A1 2012/0220264 A1		Mate et al. Kawabata
2004/0243331 A1 2005/0078804 A1		Yomoda	2012/0233000 A1*	9/2012	Fisher et al 705/14.71
2005/0097176 A1		Schatz et al.	2012/0236162 A1		Imamura
2005/0102381 A1 2005/0104976 A1		Jiang et al. Currans	2012/0239761 A1 2012/0278387 A1		Linner et al. Garcia et al.
2005/0114783 A1	5/2005		2012/0278692 A1	11/2012	Shi
2005/0122405 A1		Voss et al.	2012/0299954 A1		Wada et al.
2005/0193340 A1		Amburgey et al. Klassen et al.	2012/0307096 A1 2012/0323933 A1		Ford et al. He et al.
2005/0193345 A1 2005/0198128 A1		Anderson et al.	2013/0050260 A1		Reitan
2005/0223066 A1	10/2005	Buchheit et al.	2013/0057587 A1		Leonard et al.
2006/0114338 A1		Rothschild	2013/0059607 A1 2013/0060690 A1		Herz et al. Oskolkov et al.
2006/0270419 A1 2007/0040931 A1		Crowley et al. Nishizawa	2013/0063369 A1		Malhotra et al.
2007/0073823 A1	3/2007	Cohen et al.	2013/0067027 A1		Song et al.
2007/0082707 A1		Flynt et al.	2013/0071093 A1 2013/0085790 A1*		Hanks et al. Palmer et al 705/5
2007/0192128 A1 2007/0214216 A1		Celestini Carrer et al.	2013/0090171 A1		Holton et al.
2007/0233801 A1	10/2007	Eren et al.	2013/0104053 A1		Thornton et al.
		Bandhole et al 455/461	2013/0128059 A1 2013/0145286 A1		Kristensson Feng et al.
2007/0255456 A1 2008/0025701 A1	1/2007	Funayama Ikeda	2013/0169822 A1	7/2013	Zhu et al.
2008/0033930 A1		Warren	2013/0173729 A1		Starenky et al.
2008/0104503 A1		Beall et al.	2013/0182133 A1 2013/0185131 A1		Tanabe Sinha et al.
2008/0207176 A1 2008/0222545 A1		Brackbill et al. Lemay et al.	2013/0194301 A1		Robbins et al.
2008/0256446 A1		Yamamoto	2013/0222323 A1		McKenzie
2008/0266421 A1		Takahata et al.	2013/0227476 A1 2013/0232194 A1*	8/2013	Frey Knapp et al 709/203
2008/0270938 A1 2008/0313346 A1		Carlson Kujawa et al.	2013/0263031 A1		Oshiro et al.
2009/0006565 A1		Velusamy et al.	2013/0265450 A1		Barnes, Jr.
2009/0015703 A1		Kim et al.	2013/0290443 A1 2013/0304646 A1		Collins et al. De Geer, Jacob
2009/0024956 A1 2009/0040324 A1		Kobayashi Nonaka	2013/0344896 A1		Kirmse et al.
2009/0042588 A1	2/2009	Lottin et al.			Asver et al 715/730
2009/0058822 A1		Chaudhri	2013/0346877 A1 2014/0011538 A1		Borovoy et al. Mulcahy et al.
2009/0079846 A1 2009/0132453 A1	3/2009 5/2009	Cnou Hangartner et al.	2014/0032682 A1		Prado et al.
2009/0132665 A1	* 5/2009	Thomsen et al 709/206	2014/0047016 A1	2/2014	Rao
2009/0160970 A1		Fredlund et al.	2014/0047045 A1* 2014/0047335 A1		Baldwin et al 709/206 Lewis et al.
2009/0265647 A1 2010/0082693 A1		Martin et al. Hugg et al.	2014/0049652 A1	2/2014	Moon et al.
2010/0131880 A1	5/2010	Lee et al.	2014/0052485 A1*		Shidfar 705/7.13
2010/0131895 A1		Wohlert Pascal et al.	2014/0052633 A1 2014/0057660 A1		Gandhi Wager
2010/0159944 A1 2010/0161831 A1		Haas et al.	2014/0122658 A1	5/2014	Haeger et al.
2010/0185665 A1	7/2010	Horn et al.	2014/0122787 A1		Shalvi et al.
2010/0214436 A1		Kim et al.	2014/0129953 A1 2014/0143143 A1		Spiegel Fasoli et al.
2010/0223128 A1 2010/0223343 A1		Dukellis et al. Bosan et al.	2014/0149519 A1*	5/2014	Redfern et al 709/206
2010/0257196 A1	10/2010	Waters et al.	2014/0155102 A1		Cooper et al.
2010/0281045 A1	11/2010	Dean Della Pasqua	2014/0173457 A1 2014/0189592 A1		Wang et al. Benchenaa et al.
2010/0306669 A1 2011/0004071 A1		Faiola et al.	2014/0207679 A1	7/2014	
2011/0040783 A1	2/2011	Uemichi et al.	2014/0214471 A1*		Schreiner, III 705/7.19
2011/0040804 A1		Peirce et al.	2014/0279436 A1 2014/0280537 A1*		Dorsey et al. Pridmore et al 709/204
2011/0050909 A1 2011/0050915 A1		Ellenby et al. Wang et al.	2014/0280337 A1 2014/0282096 A1		Rubinstein et al.
2011/0102630 A1	5/2011	Rukes	2014/0317302 A1	10/2014	Naik
2011/0145564 A1		Moshir et al.	2014/0325383 A1		Brown et al.
2011/0211534 A1 2011/0273575 A1	9/2011 11/2011	Schmidt et al. Lee	2015/0046278 A1	2/2015	Pei et al.
2011/0283188 A1	11/2011	Farrenkopf et al.	OTT	TED DIT	DI ICATIONS
2011/0320373 A1	12/2011	Lee et al.	OH	TEK PU	BLICATIONS
2012/0036443 A1		Ohmori et al.	Melanson, Mike. "This	text mess:	age will self destruct in 60 seconds",
2012/0062805 A1 2012/0108293 A1		Candelore Law et al.			ved from readwrite.com on Feb. 18,
2012/0110096 A1		Smarr et al.			n/2011/02/11/this_text_message_
			=		

#### (56)References Cited

## OTHER PUBLICATIONS

will\_self\_destruct\_in\_60\_seconds, referred to hereinafter as

Sawers, Paul, "Snapchat for iOS Lets You Send Photos to Friends and Set How long They're Visible for", May 7, 2012, <a href="http://thenextweb.">http://thenextweb.</a> com/apps/2012/05/07/Snapchat-for-ios-lets-you-send-photos-tofriends-and-set-how-long-theyre-visiblefor/#!xCjrp>, pp. 1-5.

"U.S. Appl. No. 14/505,478, Advisory Action mailed Apr. 14, 2015",

"U.S. Appl. No. 14/505,478, Final Office Action mailed Mar. 17, 2015", 16 pgs.

"U.S. Appl. No. 14/505,478, Non Final Office Action mailed Jan. 27, 2015", 13 pgs.

"U.S. Appl. No. 14/505,478, Response filed Jan. 30, 2015 to Non Final Office Action mailed Jan. 27, 2015", 10 pgs.

"U.S. Appl. No. 14/505,478, Response filed Apr. 1, 2015 to Final Office Action mailed Mar. 17, 2015", 6 pgs.

"U.S. Appl. No. 14/523,728, Non Final Office Action mailed Dec. 12, 2014", 10 pgs.

"U.S. Appl. No. 14/523,728, Notice of Allowance mailed Mar. 24, 2015", 8 pgs.

"U.S. Appl. No. 14/523,728, Notice of Allowance mailed Apr. 15,

2015", 8 pgs. "U.S. Appl. No. 14/523,728, Response filed Aug. 25, 2014 to Non Final Office Action mailed Jan. 16, 2015", 5 pgs.

"U.S. Appl. No. 14/529,064, Non Final Office Action mailed Mar. 12, 2015", 20 pgs.

"U.S. Appl. No. 14/529,064, Response filed Feb. 5, 2015 to Restriction Requirement mailed Feb. 2, 2015", 6 pgs.

"U.S. Appl. No. 14/529,064, Response filed Mar. 26, 2015 to Non Final Office Action mailed Mar. 12, 2015", 8 pgs.

"U.S. Appl. No. 14/529,064, Restriction Requirement mailed Feb. 2, 2015", 5 pgs.

"U.S. Appl. No. 14/578,271, Restriction Requirement mailed Apr. 23, 2015", 8 pgs.

"U.S. Appl. No. 14/523,728, Notice of Allowance mailed Jun. 5, 2015", 8 pgs.

"U.S. Appl. No. 14/578,258, Non Final Office Action mailed Jun. 10, 2015", 12 pgs.

\* cited by examiner

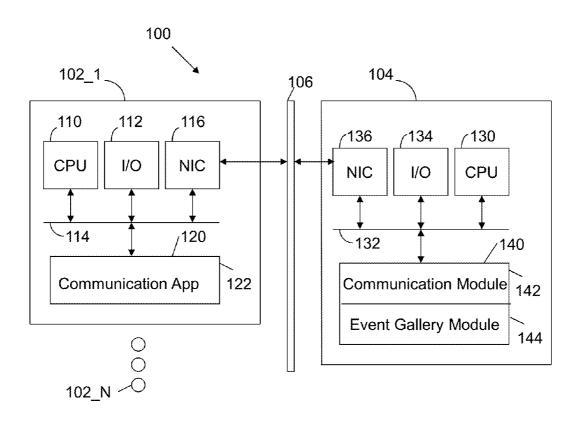
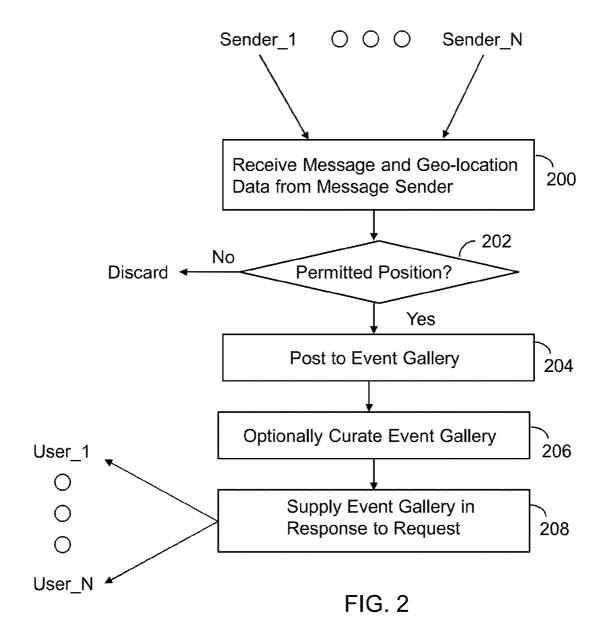


FIG. 1



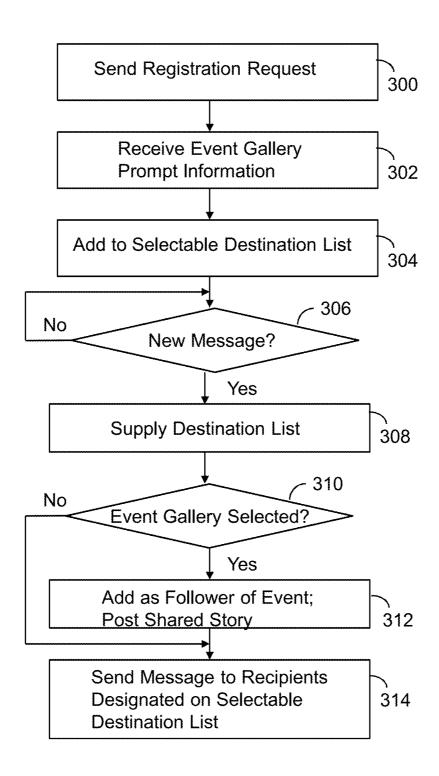


FIG. 3

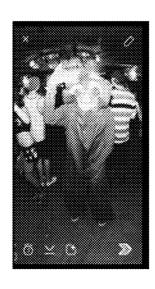


FIG. 4

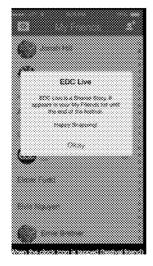


FIG. 6

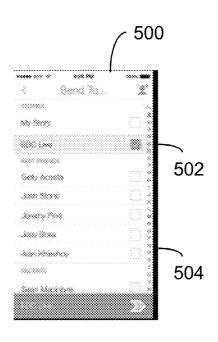


FIG. 5

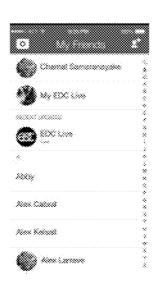


FIG. 7

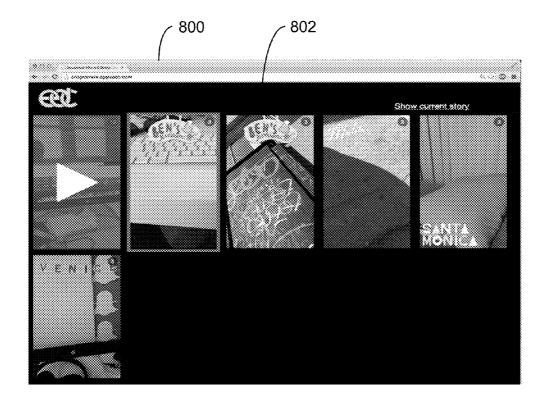


FIG. 8

## GEO-LOCATION BASED EVENT GALLERY

#### FIELD OF THE INVENTION

This invention relates generally to exchanging electronic 5 messages in a computer network. More particularly, this invention relates to a geo-location based gallery of messages associated with an event.

#### BACKGROUND OF THE INVENTION

Mobile devices, such as smartphones, are used to generate messages. The messages may be text messages, photographs (with or without augmenting text) and videos. Users can share such messages with individuals in their social network. However, there is no mechanism for sharing messages with strangers that are participating in a common event.

#### SUMMARY OF THE INVENTION

A computer implemented method includes receiving a message and geo-location data for a device sending the message. It is determined whether the geo-location data corresponds to a geo-location fence associated with an event. The 25 message is posted to an event gallery associated with the event when the geo-location data corresponds to the geo-location fence associated with the event. The event gallery is supplied in response to a request from a user.

#### BRIEF DESCRIPTION OF THE FIGURES

The invention is more fully appreciated in connection with the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1 illustrates a system configured in accordance with an embodiment of the invention.

 ${\rm FIG.}\,2$  illustrates server side processing associated with an embodiment of the invention.

FIG. 3 illustrates client side processing associated with an  $\,^{40}$  embodiment of the invention.

FIGS. **4-8** illustrate graphical user interfaces that may be associated with embodiments of the invention.

Like reference numerals refer to corresponding parts throughout the several views of the drawings.

#### DETAILED DESCRIPTION OF THE INVENTION

Figure illustrates a system 100 configured in accordance with an embodiment of the invention. The system 100 50 includes a set of client devices 102\_1 through 102\_N and at least one server 104 connected via a network 106. The network 106 may be any combination of wired or wireless networks.

Each client device 102 has standard components, such as a central processing unit 110 and input/output devices 112 connected via a network 114. The input/output devices 112 may include a touch display, dedicated control buttons, physical connectors, speakers and the like. A network interface circuit 116 is also connected to the bus 114 and provides connectivity to network 106. A memory 120 is also connected to the bus 114. The memory 120 stores a communication application 122. The communication application 122 includes instructions executed by CPU 110 to coordinate communications with server 104 and/or other client devices. 65 The client device may be in the form of a tablet, smartphone, wearable technology, laptop computer or desktop computer.

2

The server 104 also includes standard components, such as a central processing unit 130, a bus 132, input/output devices 134 and a network interface circuit 136. A memory 140 is connected to the bus 132. The memory 140 stores a communication module 142. The communication module 142 includes instructions executed by the CPU 130 to coordinate communications with client devices 102. The memory 140 also stores an event gallery module 144. The event gallery module 144 includes instructions executed by the CPU 130 to store messages from participants in a live event. The messages form an event gallery, which may be supplied to a client device 102 in response to a request from a client device 102.

FIG. 2 illustrates operations associated with an embodiment of the event gallery module 144. The top of the figure illustrates a set of message senders, i.e., Sender\_1 through Sender\_N. Each message sender is associated with a client device 102. The communication application 122 is configured to accompany a message with geo-location information. Typically, the geo-location information will be collected from a GPS chip resident in the client device. However, other geo-location information may also be used, such as cellular network geo-location information, self-reported geo-location information and the like.

The event gallery module **144** includes an administrative interface that allows one to define an event. For example, the administrative interface may prompt an event planner for event name, event description, event date, event time and event location. The event location is specified in physical coordinates (e.g., GPS coordinates) that define a geo-location fence associated with the event.

As previously indicated, messages from senders include geo-location information. The server 104 receives such messages and geo-location data 200 from any number of senders. For each message, the geo-location data is compared to the geo-location fence. If the message was not sent from within the geo-location fence it is not from a permitted position and it is therefore discarded (202—No). If the message is from a permitted position (202—Yes), the message is posted to an event gallery 204.

The event gallery module 144 may include a curation interface that allows an event planner to optionally curate the event gallery 206. For example, the curation interface may allow the event planner to delete inappropriate or redundant messages. The final operation of FIG. 2 is to supply the event gallery in response to requests 208 from any number of users.

FIG. 3 illustrates processing associated with the communication application 122 resident on a client device 102. The communication application 122 sends a registration request 300. The registration request may be an explicit request to join or follow an event. Alternately, the registration request may be triggered by sending geo-location data to server 104. The event gallery module 144 determines whether the geolocation data corresponds to a geo-location fence associated with an event. Event gallery prompt information is received 302 in response to a request. The event gallery prompt information may be indicia of the event, such as a brand, a textual description and the like. The event gallery prompt information is added to a selectable destination list 304. The selectable destination list 304 includes individuals in a user's social network. In this case, the selectable destination list is augmented with indicia of an event.

If a user generates a message (306—Yes) the destination list is supplied 308. The destination list includes individuals in a user's social network and indicia of the event and/or event gallery. If the event gallery is selected (310), the user is added as a follower of the event 312. So, for example, in the case where the user received the event gallery prompt in response

3

to simply communicating geo-location data, the user may formally follow the event by posting a message (shared story) to the event gallery. That is, the event gallery module **144** adds the user to a list of event followers in response to the user posting a message to the event gallery. Finally, messages are sent to recipients designated on the selectable destination list **314**. These recipients are typically individuals in the user's social network.

FIG. 4 is an example of a message taken at an event. In this example, the message is a photograph, which may be augmented with text. FIG. 5 illustrates a selectable destination list 500. The selectable destination list 500 includes an entry for a live event 502 and entries 504 for individuals in a social network. Selecting the live event 502 from the selectable destination list 500 may result in a prompt as shown in FIG. 6.

The prompt may explain terms associated with posting content to the event gallery. FIG. 7 illustrates an interface listing friends in a social network and one or more events that are being followed.

FIG. **8** is an example of an event gallery **800**. The event gallery **800** includes individual posted messages **802**. The messages may be photographs, videos or text messages. The event gallery may be available for a specified transitory period. For example, the specified transitory period may be the duration of an event. Indicia of the event gallery may appear in a list of friends (e.g., destination list) for the duration of the event. In one embodiment, the event gallery has individual ephemeral messages shown in a sequence. For example, a first image is shown for five seconds, then a second image is shown for three seconds, etc.

An event gallery may be open to all event participants. Alternately, an event gallery may be formed for a subset of participants selected from a destination list or some other list (e.g., a list of co-workers at an event). An embodiment of the invention maintains an ongoing event gallery (shared story) <sup>35</sup> for a geo-location. For example, the shared story may extend over months. Alternately, the shared story may be renewed every twenty-four hour period at a specified geo-location.

An embodiment of the present invention relates to a computer storage product with a non-transitory computer read-  $^{\rm 40}$ able storage medium having computer code thereon for performing various computer-implemented operations. The media and computer code may be those specially designed and constructed for the purposes of the present invention, or they may be of the kind well known and available to those 45 having skill in the computer software arts. Examples of computer-readable media include, but are not limited to: magnetic media, optical media, magneto-optical media and hardware devices that are specially configured to store and execute program code, such as application-specific integrated circuits 50 ("ASICs"), programmable logic devices ("PLDs") and ROM and RAM devices. Examples of computer code include machine code, such as produced by a compiler, and files containing higher-level code that are executed by a computer using an interpreter. For example, an embodiment of the 55 invention may be implemented using JAVA®, C++, or other object-oriented programming language and development tools. Another embodiment of the invention may be implemented in hardwired circuitry in place of, or in combination with, machine-executable software instructions.

The foregoing description, for purposes of explanation, used specific nomenclature to provide a thorough understand-

4

ing of the invention. However, it will be apparent to one skilled in the art that specific details are not required in order to practice the invention. Thus, the foregoing descriptions of specific embodiments of the invention are presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed; obviously, many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, they thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated. It is intended that the following claims and their equivalents define the scope of the invention.

The invention claimed is:

1. A computer implemented method, comprising:

receiving a message and geo-location data for a device sending the message, wherein the message includes a photograph or a video;

determining whether the geo-location data corresponds to a geo-location fence associated with an event;

supplying a destination list to the device in response to the geo-location data corresponding to the geo-location fence associated with the event, wherein the destination list includes a user selectable event gallery indicium associated with the event and a user selectable entry for an individual in a social network;

adding a user of the device as a follower of the event in response to the event gallery indicium being selected by the user; and

supplying an event gallery in response to a request from the user, wherein the event gallery includes a sequence of photographs or videos and wherein the event gallery is available for a specified transitory period.

- 2. The computer implemented method of claim 1 further comprising curating the event gallery, wherein curating includes removing selected photographs or videos.
- 3. The computer implemented method of claim 1 wherein the event gallery is available for a specified transitory period corresponding to the duration of the event.
- **4**. The computer implemented method of claim **1** wherein the event gallery has individual ephemeral messages shown in sequence, wherein the individual ephemeral messages includes photographs or videos.
- 5. The computer implemented method of claim 1 wherein the message has text accompanying the photograph or the video.
- **6**. The computer implemented method of claim **1** further comprising sending event gallery prompt information to the device.
- 7. The computer implemented method of claim 1 further comprising:

identifying event gallery selection at the device; and adding the device as a follower of the event with access to the event gallery.

**8**. The computer implemented method of claim **1** further comprising:

receiving a selection of the event gallery indicia; and providing a prompt to explain terms associated with posting content in the event gallery.

\* \* \* \* \*