

CLAIMS

What is claimed is:

1. A method for capturing, collecting, and distributing event information displayed on signs, the method comprising:

capturing, by a mobile device, an image of a sign that displays information for an event;
extracting information for the event from the captured image of the sign;
determining a location of the mobile device when the image of the sign was captured; and

uploading, to a server, (i) a time when the image was captured, (ii) the information for the event extracted from the captured image, (iii) a location of the event determined from extracted event information, (iv) a location of the sign, or a combination thereof.

2. The method of claim 1, wherein extracting information for the event from the captured image comprises:

performing an image analysis comprising analyzing the captured image with one or more classifiers to detect one or more objects within the image, the one or more objects comprising graphical information associated with the event.

3. The method of claim 1, wherein extracting information for the event from the captured image comprises:

performing optical character recognition on the captured image to extract textual information associated with the information for the event.

4. The method of claim 1, wherein extracting information for the event from the captured image comprises:

detecting a directional indicator on the sign based on the performed image analysis; and

estimating the location of the event based on an estimated location of the sign and the directional indicator, wherein the estimated location of the sign is

based on the location of the mobile device when the image of the sign was captured.

5. The method of claim 1, wherein extracting information for the event from the captured image comprises:

querying a database for additional information for the event based on textual information extracted from the image, one or more objects detected within the image, or a combination thereof; and

integrating the additional information, received from the database in response to the query, with information known about the event.

6. The method of claim 1, wherein the time, the information, and the location uploaded to the server establish a unique event profile record for the event in an events profile database maintained by the server, the unique event profile record comprising a unique event identifier, a duration of the event based at least in part on the time, a geofence associated with a predefined boundary surrounding the event based at least in part on the location, and data indicative of the event based at least in part on the information.

7. The method of claim 1, wherein the mobile device comprises a motor vehicle.

8. A mobile device for capturing, collecting, and distributing event information displayed on signs, the system comprising:

an imaging system to capture an image of a sign that displays information for an event;

a memory configured to store the captured image; and

one or more processors communicably coupled with the memory and the imaging system, the one or more processors configured to:

extract information for the event from the captured image of the sign, and

determine a location of the mobile device when the image of the sign was captured; and

a communications subsystem communicably coupled with the one or more processors to upload, to a server, (i) a time when the image was captured, (ii) the information for the event extracted from the captured image, (iii) a location of the event determined from extracted event information, (iv) a location of the sign, or a combination thereof.

9. The mobile device of claim 8, wherein the one or more processors are further configured to perform an image analysis comprising analyzing the captured image with one or more classifiers to detect one or more objects within the image, the one or more objects comprising graphical information associated with the event.

10. The mobile device of claim 8, wherein the one or more processors are further configured to perform optical character recognition on the captured image to extract textual information associated with the information for the event.

11. The mobile device of claim 8, wherein the one or more processors are further configured to:

detect a directional indicator on the sign based on the performed image analysis; and

estimate the location of the event based on an estimated location of the sign and the directional indicator, wherein the estimated location of the sign is based on the location of the mobile device when the image of the sign was captured.

12. The mobile device of claim 8, wherein the one or more processors are further configured to:

query a database for additional information for the event based on textual information extracted from the image, one or more objects detected within the image, or a combination thereof; and

integrate the additional information, received from the database in response to the query, with information known about the event.

13. The mobile device of claim 8, wherein the time, the information, and the location uploaded to the server establish a unique event profile record for the event in an events profile database maintained by the server, the unique event profile record comprising a unique event identifier, a duration of the event based at least in part on the time, a geofence associated with a predefined boundary surrounding the event based at least in part on the location, and data indicative of the event based at least in part on the information.

14. The mobile of claim 8, wherein the mobile device comprises a motor vehicle.

15. A non-transitory computer readable storage medium including instructions that, when executed by a processor, cause the processor to perform operations for capturing, collecting, and distributing event information displayed on signs, the operations comprising:

- capturing an image of a sign that displays information for an event;
- extracting information for the event from the captured image of the sign;
- determining a location of a mobile device when the image of the sign was captured; and

uploading, to a server, (i) a time when the image was captured, (ii) the information for the event extracted from the captured image, (iii) a location of the event determined from extracted event information, (iv) a location of the sign, or a combination thereof.

16. The non-transitory computer readable storage medium of claim 15, wherein the time, the information, and the location uploaded to the server establish a unique event profile record for the event in an events profile database maintained by the server, the unique event profile record comprising a unique event identifier, a duration of the event based at least in part on the time, a geofence associated with a predefined boundary surrounding the event based at least in part on the location, and data indicative of the event based at least in part on the information.

17. An apparatus, comprising:
means for capturing an image of a sign that displays information for an event;
means for extracting information for the event from the captured image of the sign;
means for determining a location of a mobile device when the image of the sign was captured; and
means for uploading, to a server, (i) a time when the image was captured, (ii) the information for the event extracted from the captured image, (iii) a location of the event determined from extracted event information, (iv) a location of the sign, or a combination thereof.

18. The apparatus of claim 17, wherein the time, the information, and the location uploaded to the server establish a unique event profile record for the event in an events profile database maintained by the server, the unique event profile record comprising a unique event identifier, a duration of the event based at least in part on the time, a geofence associated with a predefined boundary surrounding the event based at least in part on the location, and data indicative of the event based at least in part on the information.

19. A method for distribution of event information displayed on signs to a mobile device, the method comprising:
establishing, by a user of the mobile device, a user profile with a server, wherein the user profile comprises one or more interests of the user of the mobile device;
reporting a current location of the mobile device to the server;
receiving an event notification for an event, wherein the event notification is selected and delivered by the server to the mobile device based, at least in part, on: (i) the current location of the mobile device indicating that a geofence established by the server around the event has been breached by the current location of the mobile device, (ii) the one or more interests of the user in the user profile, and (iii) a duration associated with the event indicating that the event is active; and

wherein the event is an event established by the server in response to receiving event information for the event captured by a second mobile device from a sign that displays information for the event.

20. The method of claim 19, further comprising:

utilizing, by the mobile device, a location of the event in the event notification to configure a navigation system of the mobile device to navigate the user to the event.

21. The method of claim 19, further comprising:

displaying one or more attributes associated with the event to the user in response to receipt of the event notification for the event by the mobile device.

22. The method of claim 19, wherein a sign for the event is not within a field of view of an imaging system of the mobile device.

23. The method of claim 19, wherein a location of the event and a time of the event are estimated based, at least in part, on a time and a location of the second mobile device when an image of the sign was captured by the second mobile device.

24. A mobile device, comprising:

a positioning system to determine a current location of the mobile device;
a communications subsystem communicably coupled with the positioning system to report the current location of the mobile device to a server; and

one or more processors communicably coupled with the communications subsystem to:

establish, by a user of the mobile device, a user profile that comprises one or more interests of the user of the mobile device, wherein the user profile is established on the server using the communications subsystem, and

display an event notification, received by the communication subsystem, to the user of the mobile device, wherein the event

notification is selected and delivered by the server to the mobile device based, at least in part, on: (i) the current location of the mobile device indicating that a geofence established by the server around the event has been breached by the current location of the mobile device, (ii) the one or more interests of the user in the user profile, and (iii) a duration associated with the event indicating that the event is active, and
wherein the event is an event established by the server in response to receiving event information for the event captured by a second mobile device from a sign that displays information for the event.

25. The system of claim 24, further comprising:

a navigation system, wherein the one or more processors are configured to utilize a location of the event in the event notification to configure the navigation system to navigate the user to the event.

26. The system of claim 24, further comprising:

a display configured to render a graphic user interface generated by the one or more processors, wherein the graphical user interface displays one or more attributes associated with the event in response to receipt of the event notification for the event.

27. The system of claim 24, wherein a sign for the event is not within a field of view of an imaging system of the mobile device.

28. The system of claim 24, wherein a location of the event and a time of the event are estimated based, at least in part, on a time and a location of the second mobile device when an image of the sign was captured by the second mobile device.

29. An apparatus, comprising:

means for establishing, by a user, a user profile with a server, wherein the user profile comprises one or more interests of the user;
means for reporting a current location of the apparatus to the server;

means for receiving an event notification for an event, wherein the event notification is selected and delivered by the server to the apparatus based, at least in part, on: (i) the current location of the apparatus indicating that a geofence established by the server around the event has been breached by the current location of the apparatus, (ii) the one or more interests of the user in the user profile, and (iii) a duration associated with the event indicating that the event is active; and

wherein the event is an event established by the server in response to receiving event information for the event captured by a mobile device from a sign that displays information for the event.

30. A non-transitory computer readable storage medium including instructions that, when executed by a processor, cause the processor to perform operations for distribution of event information displayed on signs to a mobile device, the operations comprising:

establishing, by a user of a mobile device, a user profile with a server, wherein the user profile comprises one or more interests of the user of the mobile device;

reporting a current location of the mobile device to the server;

receiving an event notification for an event, wherein the event notification is selected and delivered by the server to the mobile device based, at least in part, on: (i) the current location of the mobile device indicating that a geofence established by the server around the event has been breached by the current location of the mobile device, (ii) the one or more interests of the user in the user profile, and (iii) a duration associated with the event indicating that the event is active; and

wherein the event is an event established by the server in response to receiving event information for the event captured by a second mobile device from a sign that displays information for the event.