[009a] In one aspect, there is provided a method for providing sensor data from tracking devices, the method comprising the following operations performed by one or more processors: receiving, from a client device, a request for sensor data, the request including a triggering parameter, wherein the sensor data reflects a measurement of an environmental condition associated with a location of a tracking device; determining whether real-time sensor data is required based on the request for sensor data; identifying a set of tracking devices that meet the triggering parameter; retrieving the requested sensor data, wherein, when real-time sensor data is not required, retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices; determining whether the client device has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and returning a portion of the retrieved sensor data for which the client device has authorization, in response to the request, for display to a user.

[009b] In another aspect, there is provided a system for providing sensor data, the system comprising: a client operable to initiate a request for sensor data, the request including at least one triggering parameter, wherein the sensor data reflects a measurement of a physical condition associated with a location of a tracking device; a plurality of tracking devices; and a tracking center operable to: receive the request for sensor data; determine whether real-time sensor data is required based on the request for sensor data; identify a set of tracking devices from the plurality of tracking devices that meet the triggering parameter; retrieve the requested sensor data, wherein, when real-time sensor data is not required retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices; determine whether the client has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and return a portion of the retrieved sensor data to the client for which the client has authorization, in response to the request.

[009c] In yet another aspect, there is provided a non-transitory computer-readable medium storing instructions, which when executed by a processor, cause the processor to perform a

method for providing sensor data from tracking devices using a context based sensor network, the method comprising: receiving, from a client, a request for sensor data, the request including a triggering parameter, wherein the sensor data reflects a measurement of a physical condition associated with a location of a tracking device; identifying a set of tracking devices that meet the triggering parameter; retrieving the requested sensor data, wherein, when real-time sensor data is not required, retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices; determining whether the client device has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and returning a portion of the retrieved sensor data for which the client has authorization, in response to the request, for display to a user.

WHAT IS CLAIMED IS:

1. A method for providing sensor data from tracking devices, the method comprising the following operations performed by one or more processors:

receiving, from a client device, a request for sensor data, the request including a triggering parameter, wherein the sensor data reflects a measurement of an environmental condition associated with a location of a tracking device;

determining whether real-time sensor data is required based on the request for sensor data;

identifying a set of tracking devices that meet the triggering parameter;

retrieving the requested sensor data, wherein, when real-time sensor data is not required, retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices;

determining whether the client device has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and

returning a portion of the retrieved sensor data for which the client device has authorization, in response to the request, for display to a user.

2. The method of claim 1, wherein the request for sensor data is initiated using a publicly available search engine.

3. The method of claim 1, wherein the tracking devices that meet the triggering parameter are selected from a plurality of item tracking devices, a plurality of beacon devices, and a plurality of user tracking devices.

4. The method of claim 1, wherein the retrieving further comprises:
when real-time sensor data is required, retrieving the requested sensor data comprises requesting and receiving sensor data from the set of tracking devices.

5. The method of claim 1, wherein the retrieving further comprises:

determining, when real-time data is required, whether the requested sensor data is available from the set of tracking devices;

determining, when the requested sensor data is not available from the set of tracking devices, whether to retrieve the requested sensor data from the database based on a data type associated with the requested sensor data; and

sending, when the requested sensor data should not be retrieved from the database, a notification to the client device.

6. The method of claim 1, further comprising:

comparing the retrieved sensor data to a predetermined environmental condition; and

providing a programming instruction to a tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition, the programming instruction including an instruction to increase the temporal frequency with which the tracking device collects the sensor data.

7. The method of claim 6, further comprising sending an alarm to a user tracking device associated with the tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition.

8. A system for providing sensor data, the system comprising:

a client operable to initiate a request for sensor data, the request including at least one triggering parameter, wherein the sensor data reflects a measurement of a physical condition associated with a location of a tracking device;

a plurality of tracking devices; and

a tracking center operable to:

receive the request for sensor data;

determine whether real-time sensor data is required based on the request for sensor data;

identify a set of tracking devices from the plurality of tracking devices that meet the triggering parameter;

retrieve the requested sensor data, wherein, when real-time sensor data is not required, retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices;

determine whether the client has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and

return a portion of the retrieved sensor data to the client for which the client has authorization, in response to the request.

9. The system of claim 8, wherein the request for sensor data is initiated using a publicly available search engine.

10. The system of claim 8, wherein the retrieving further comprises:
when real-time sensor data is required, retrieving the requested sensor data comprises requesting and receiving sensor data from the set of tracking devices.

11. The system of claim 8, wherein the retrieving further comprises:

determining, when real-time data is required, whether the requested sensor data is available from the set of tracking devices;

determining, when the requested sensor data is not available from the set of tracking devices, whether to retrieve the requested sensor data from the database based on a data type associated with the requested sensor data; and

sending, when the requested sensor data should not be retrieved from the database, a notification to the client.

12. The system of claim 8, wherein the tracking center is further configured to:

compare the retrieved sensor data to a predetermined environmental condition; and

provide a programming instruction to a tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition, the programming instruction including an instruction to increase the temporal frequency with which the tracking device collects the sensor data.

13. The system of claim 12, wherein the tracking center is further configured to send an alarm to a user tracking device associated with the tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition.

14. A non-transitory computer-readable medium storing instructions, which when executed by a processor, cause the processor to perform a method for providing sensor data from tracking devices using a context based sensor network, the method comprising:

receiving, from a client, a request for sensor data, the request including a triggering parameter, wherein the sensor data reflects a measurement of a physical condition associated with a location of a tracking device;

identifying a set of tracking devices that meet the triggering parameter;

retrieving the requested sensor data, wherein, when real-time sensor data is not required, retrieving the requested sensor data comprises retrieving sensor data from entries in a database corresponding to the set of tracking devices;

determining whether the client device has authorization to access each portion of the retrieved sensor data from the set of tracking devices; and

returning a portion of the retrieved sensor data for which the client has authorization, in response to the request, for display to a user.

15. The non-transitory computer-readable medium of claim 14, wherein the request for sensor data is initiated using a publicly available search engine.

16. The non-transitory computer-readable medium of claim 14, wherein the tracking devices that meet the triggering parameter are selected from a plurality of item tracking devices, a plurality of beacon devices, and a plurality of user tracking devices.

17. The non-transitory computer-readable medium of claim 14, wherein the retrieving further comprises:

when real-time sensor data is required, retrieving the requested sensor data comprises requesting and receiving sensor data from the set of tracking devices.

18. The computer-readable medium of claim 14, wherein the retrieving further comprises:

determining, when real-time data is required, whether the requested sensor data is available from the set of tracking devices;

determining, when the requested sensor data is not available from the set of tracking devices, whether to retrieve the requested sensor data from the database based on a data type associated with the requested sensor data; and

sending, when the requested sensor data should not be retrieved from the database, a notification to the client.

19. The computer-readable medium of claim 14, further comprising:

comparing the retrieved sensor data to a predetermined environmental condition; and

providing a programming instruction to a tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition, the programming instruction including an instruction to increase the temporal frequency with which the tracking device collects the sensor data.

20. The computer-readable medium of claim 19, further comprising sending an alarm to a user tracking device associated with the tracking device collecting the sensor data when the retrieved sensor data satisfies the predetermined environmental condition.

WHAT IS CLAIMED IS:

1. A method for providing sensor data, comprising:

receiving a request for sensor data, the request including a triggering parameter;

searching for information identifying devices that meet the triggering parameter, wherein the devices that meet the triggering parameter are selected from a plurality of item tracking devices;

retrieving the requested sensor data, the requested sensor data corresponding to the devices that meet the triggering parameter; and

returning the requested sensor data.

2. The method of claim 1, wherein returning the requested sensor data comprises:

determining whether a user that initiated the request has authorization to access all of the requested sensor data for the devices that meet the triggering parameter; and

providing the requested sensor data for the devices that meet the triggering parameter based on the determining.

3. The method of claim 1, wherein the request for sensor data is initiated using a search engine available on the Internet.

4. The method of claim 1, wherein said searching for information comprises searching a database for the information, and said retrieving requested sensor data comprises retrieving the requested sensor data from entries in the database that correspond to the devices that meet the triggering parameter.

5. The method of claim 1, wherein devices are selected from a plurality of item tracking devices, a plurality of beacon devices, and a plurality of user tracking devices.

6. The method of claim 1, wherein searching for information comprises determining a set of devices that meets the triggering parameter, and retrieving requested sensor data comprises requesting and receiving sensor data from the set of devices.

7. A system for providing sensor data, comprising:

a client operable to initiate a request for sensor data, the request including at least one triggering parameter;

a plurality of item tracking devices, each of the item tracking devices corresponding to a respective one of a plurality of items; and

a tracking center operable to: receive the request for sensor data; search for information identifying devices that meet the at least one triggering parameter, wherein the devices that meet the at least one triggering parameter are selected from the plurality of item tracking devices; retrieve the requested sensor data, the requested sensor data corresponding to the devices that meet the at least one triggering parameter; and return the requested sensor data to the client.

8. The system of claim 7, wherein the tracking center determines whether a user that initiated the request has authorization to access all of the requested sensor data for the devices that meet the at least one triggering parameter, and provides the requested sensor data for the devices that meet the at least one triggering parameter based on the determining.

9. The system of claim 7, wherein the request for sensor data is initiated using a search engine available on the Internet.

10. The system of claim 7, wherein the tracking center searches a database for the information, and retrieves the requested sensor data from entries in the database that correspond to the devices that meet the at least one triggering parameter.

11. The system of claim 7, wherein the tracking center determines a set of devices that meets the at least one triggering parameter, and requests and receives sensor data from the set of devices.

12. A computer-readable medium containing instructions for performing a method for providing sensor data using a context based sensor network, the method comprising:

receiving a request for sensor data, the request including a triggering parameter;

searching for information identifying devices that meet the triggering parameter, wherein the devices that meet the triggering parameter are selected from a plurality of item tracking devices;

retrieving the requested sensor data, the requested sensor data corresponding to the devices that meet the triggering parameter; and

returning the requested sensor data.

13. The computer-readable medium of claim 12, wherein returning the requested sensor data comprises:

determining whether a user that initiated the request has authorization to access all of the requested sensor data for the devices that meet the triggering parameter; and

providing the requested sensor data for the devices that meet the triggering parameter based on the determining.

14. The computer-readable medium of claim 12, wherein the request for sensor data is initiated using a search engine available on the Internet.

15. The computer-readable medium of claim 12, wherein said searching for information comprises searching a database for the information, and said retrieving requested sensor data comprises retrieving the requested sensor data from entries in the database that correspond to the devices that meet the triggering parameter.

16. The computer-readable medium of claim 12, wherein devices are selected from a plurality of item tracking devices, a plurality of beacon devices, and a plurality of user tracking devices.

17. The computer-readable medium of claim 12, wherein searching for information comprises determining a set of devices that meets the triggering parameter, and retrieving requested sensor data comprises requesting and receiving sensor data from the set of devices.