CLAIMS

What is claimed:

1. A light fixture comprising:

a sensor unit and a light intensity controller; wherein

the sensor unit comprises;

a sensor, the sensor operative to generate a sense signal based on at least one of sensed motion or light;

a wireless communication circuitry, the communication circuitry operative to maintain a link with a network;

a controller, the controller operative to:

manage communication with the network;

manage reception of beacons through the wireless communication circuitry, wherein the beacons are received from an object, and the beacons include information associated with the object;

generate dimming control based on at least one of the sensed signal and communication from the network; and wherein

the light intensity controller is configured to receive the dimming control and operative to adjust an emitted light intensity of a luminaire of the light fixture;

wherein the light fixture is operative to measure a received signal strength indicator (RSSI) of the received beacons, and wherein the controller is operative to compare the currently measured RSSI with a predetermined set of RSSI fingerprints to determine a location of the object; and

wherein the predetermined set of RSSI fingerprints is based on stored prior measurements of signal strength at a sampling of locations.

2. The light fixture of claim 1, wherein the information associated with the object includes at least one of a transmission power of the beacons, a unique ID of the object, or remaining battery power of the object.

3. The light fixture of claim 2, wherein the unique ID allows for filtering of received beacons.

4. The light fixture of claim 2, wherein the information associated with the object includes at

least transmission power of the beacons, and wherein the controller is further operative to estimate a distance between the light fixture and the object based on the RSSI of the received beacons and the transmission power of the beacons.

5. The light fixture of claim 1, wherein the information associated with the object includes sensed motion of the object.

6. The light fixture of claim 5, wherein the sensed motion includes sensed acceleration of the object.

7. The light fixture of claim 6, wherein the sensed acceleration includes a magnitude and direction of acceleration of the object along one or more directions.

8. The light fixture of claim 7, the controller is further operative to detect an orientation of the object at rest and a direction a magnitude of movement of the object based on the magnitude and direction of the acceleration of the object along one or more directions.

9. The light fixture of claim 6, wherein the sensed acceleration of the object influences a rate at which the object transmits the beacons.

10. The light fixture of claim 1, wherein the information associated with the object includes at least one of gyroscope data, magnetometer data, temperature data, air quality measurements.

11. The light fixture of claim 1, wherein the controller is operative to estimate a distance between the light fixture and the object based on the RSSI of the received beacons and a transmission power of the beacons, and wherein at least one of the controller and another controller is operative to estimate a location of the object based on the estimated distance.

12. The light fixture of claim 11, wherein estimating the location of the object is further based on sensed motion data within the beacons.

13. The light fixture of claim 1, wherein the controller is further operative to sense motion, and wherein location of the object is determined only after sensing the motion.

14. The light fixture of claim 1, wherein a power lever of transmission of the beacons from the object is limited to below a threshold.

15. A method of operating a light fixture comprising:

generating, by a sensor of the light fixture, a sense signal based on at least one of sensed motion or light;

maintaining a communications link between the light fixture and a network;

managing communication with the network;

managing manage reception of beacons through a wireless communication circuitry, wherein the beacons are received from an object, and the beacons include information associated with the object;

generating dimming control base on at least one of the sensed signal and communication from the network;

adjusting a dimming control line of a luminaire of the light fixture based on the dimming control;

measuring, by the light fixture, a received signal strength indicator (RSSI) of the received beacons, and comparing the currently measured RSSI with a predetermined set of RSSI fingerprints to determine a location of the object; and

wherein the predetermined set of RSSI fingerprints is based on stored prior measurements of signal strength at a sampling of locations.

16. The method of claim 15, wherein the information associated with the object includes at least one of a transmission power of the beacons, a unique ID of the object, or remaining battery power of the object.

17. The method of claim 16, wherein the information associated with the object includes at least transmission power of the beacons, and wherein the controller is further operative to estimate a distance between the light fixture and the object based on the RSSI of the received beacons and the transmission power of the beacons.

18. The method of claim 17, wherein the information associated with the object includes sensed motion of the object, wherein the sensed motion includes sensed acceleration of the object.

19. The method of claim 18, wherein the sensed acceleration of the object influences a rate at which the object transmits the beacons.

20. The method of claim 15, further comprising estimating a distance between the light fixture and the object based on the RSSI of the received beacons and a transmission power of the beacons, and estimating a location of the object based on the estimated distance.