Claims

[Claim 1] 1. A system comprising An an assembly and one or more moving tags, the assembly comprising:

a low power light source (100),
a distance measuring radio (400),
an electrical energy storage means (200); and
an adapter (300) compatible with a standard light source socket. ,
characterized in that the distance measuring radio (400) is configured to scan, in a configuring mode as a tag, for neighboring anchors and tags whose position has already been determined and then configured to measure distance between the assembly and neighbors with known locations and once at least three neighbors with determined positions are identified, distances to those neighbors being measured by means of the distance measuring radio (400), in such a way that a location of the assembly is geometrically computed by trilateration, the assembly being configured as an anchor, and
wherein the one or more moving tags are configured to use, in a normal operating mode, the known position of said assembly newly configured as an anchor to measure distances of said anchor to said one or more moving tags, said one or more moving tags being able to use the known position and distance to the newly configured anchor, along with like information from other configured anchors, to determine their position.

[Claim 2] 2. The assemblysystem of claim 1, wherein the low power light source is a LED light source.

[Claim 3] 3. The assemblysystem of claim 1, said assembly being of a shape and size compatible with a standard light source.

[Claim 4] 4. The assemblysystem of claim 3 wherein said standard light source is a light unit for a vehicle.

[Claim 5] 5. The assemblysystem of claim 1, said assembly being configured so that electrical energy is received from the socket during the times when light source (100) is illuminated and is stored in the electrical energy storage means (200), the stored energy being used to power the distance measuring radio (400) during periods when no electrical power is provided to the socket.

[Claim 6] 6. The assembly system of claim 1, wherein electrical energy storage means (200) may be a battery, a capacitor or similar means.

~~[Claim 7]~~ ~~7.~~ A method of configuring a system comprising an assembly and one or more moving tags, the assembly ~~according to claim 1~~ comprising~~:~~ ~~the steps of~~

a low power light source (100),

a distance measuring radio (400),

an electrical energy storage means (200); and

an adapter (300) compatible with a standard light sourse socket and using the assembly to determine location of moving tags, said method comprising the steps of:

a) checking whether location of the assembly has already been determined,

b) if yes, proceeding to step g),

c) if no, configuring assembly as a tag and scanning for neighbors with known locations,

d) when at least 3 neighbors with known locations are detected, proceeding to e) otherwise proceeding to step c),

e) measuring distances to at least 3 neighbors with known locations,

f) calculating assembly location by trilateration,

g) configuring assembly as an anchor~~.~~, and

wherein the one or more moving tags are configured to use, in a normal operating mode, the know position of said assembly newly configured as an anchor to measure distances of said anchor to said one or more moving tags, said one or more moving tags being able to use the known position and distance to the newly configured anchor, along with like information from other configured anchors, to determine their position.

~~[Claim 8]~~ 8. A method of providing a visual indication from a system ~~an assembly~~ according to claim 1, said method consisting of alternatively illuminating and dimming said light source (100) in a timed pattern, said pattern being responsive to a status of said distance measuring radio (400), wherein electrical power for said illuminating of light source (100) is at least partially supplied from said electrical power storage means (200), and wherein said electrical power storage means (200) is at least periodically recharged by means of electrical power supplied via said adapter.