~~WE CLAIM:~~CLAIMS

1. A method for determining crowdedness at a location, using ~~at least one~~ a first portable communication device having at least one proximity sensor, the method comprising:
    a. determining the location of a first user using the ~~at least one~~ first portable communication device having an application installed on a memory module thereof , wherein the application is configured to connect to a plurality of location sensors and an accelerometer embedded therein the first portable communication device;
    b. sensing and identifying at least one second portable communication device in vicinity of the first user at said location using the at least one proximity sensor of the first portable communication device;
    c. transmitting a media access control address (MAC address) of the identified at least one second portable communication device to a remote fusion server using a communication means of said first portable communication device; and
    d. removing redundancies pertaining to the identified at least one second portable communication device based on the MAC address received by the remote fusion server using a fusion algorithm to determine the crowdedness at the determined location.

2. The method of claim 1, for determining the crowdedness, further comprises capturing geo-tagged information of a plurality of other users from a plurality of pre-defined sources which correspond to the determined location and mapping with respect to the first user.

3. The method of claim 1, for determining the crowdedness wherein a first constant for compensating uncertainty of detected second devices is determined by taking a ratio of number of devices present at the location to an empirical value of number of devices believed to be present at the location.

4. The method of claim ~~1~~ 3 for determining the crowdedness, wherein the fusion algorithm further comprises of multiplying the determined devices count with the first constant and adding a second constant to the product, wherein the second constant determined by historical data collected for a defined time period by running the application in a closed loop environment for a plurality of iterations.

5. The method for determining the location of the first user of claim 1, wherein a public location is determined by the application by implementing a method comprising:
    a. accessing at least one of the plurality of location sensors selected from an available Wi-Fi network or global positioning system (GPS) or location server or combination thereof at a predefined interval of time;
    b. extrapolating a route using ~~an~~ the accelerometer embedded in the first portable communication device; and
    c. determining the location by mapping the extrapolated route with the location sensors.

6. The method for determining the location of the first user of claim 5, wherein the public location comprises of a train station or a bus station or a taxi stand or a shopping mall.

7. The method for determining the location of claim 1, wherein the location inside a train or a bus or a closed loop environment is determined using a method comprising:
    a. retrieving a last location of the first user from the remote fusion server;
    b. capturing velocity of the first user using ~~an~~ the accelerometer embedded in the first portable communication device or an ultrasound data from a beacon;
    c. transmitting the captured velocity or ultrasound data to the remote fusion server; and
    d. determining the location by mapping the last location retrieved with the transmitted captured velocity or ultrasound data.

8. A system for determining crowdedness at a location, the system comprising:
    a. a fusion server comprising a data reception module and a data processing unit to derive a probabilistic count approximation;
    b. ~~at least one~~ a first portable communication device, having an application embedded therein to cause location determination, devices information aggregation and transmission of said information, communicatively coupled with the remote fusion server using at least one communication means;
    c. at least one proximity sensor mounted thereon the first portable communication device and is operably coupled with said application, wherein the at least one

proximity sensor is adapted to sense and identify MAC address of at least one second portable communication device in vicinity thereof; and

d. a plurality of location sensors and an accelerometer embedded in the first portable communication device that enables location determination.

9. The system of claim 8 for determining crowdedness at the location, wherein the at least one proximity sensor is selected from a Bluetooth™, or Ad-hoc Wi-Fi or combination thereof.

10. The system of claim 8 for determining crowdedness at the location, wherein the plurality of location sensor is selected from a global positioning system (GPS), or an ultrasound beacon or a Wi-Fi network or combination thereof.

11. The system of claim 8 for determining crowdedness at the location, further comprises a fusion algorithm installed on the remote server enabled to analyse the capture data pertaining to the at least one second portable communication device.

12. An apparatus for estimating the crowdedness at a location, apparatus comprising the elements of:

an application embedded on a memory module of a portable communication device to cause the device to be synchronously receptacle to a plurality of devices in a vicinity thereof;

at least one proximity sensor mounted on the portable communication device and is operatively coupled to said application;

at least one location sensor and an accelerometer mounted on the portable communication device to ~~detect a spatial position of the portable communication device and to communicably receive a position information from an external source~~ enable location information;

at least one computation engine in said portable communication device to remove redundancies in the sensed devices in the proximity and accumulated entries thereof in a predefined time frame; and

a communication means configured to transmit a media access control address (MAC address) of said accumulated devices.

13. The apparatus of claim 12, wherein the at least one computation engine is a fusion engine ~~(118)~~.

14. The apparatus of claim 12, further comprising a communications interface in the portable communication device for establishing communication means between the portable communication device and the at least one server for transmitting accumulated MAC addresses of the sensed devices.