

CLAIMS

1. A method involving a portable or wearable medical device the medical device having an operations sensor, a processing unit and a memory and a cell phone transceiver integrated in a housing and is able to store information in the memory about time points for operation events, the medical device being carried by a user, and a client device carried by the same user, where the client device comprises instructions that causes the client device to determine the position at least at predetermined time intervals or where the cell network provides the position of the client device to a server at predetermined time interval, the method comprising the steps of:
 - a. the client device determining the geographical position for the client device for at least a first time point and a second time point, and transferring these positions and time points to the server via a data connection, or the client device having its position determined for at least a first time point and a second time point by a cell network, and the cell network providing the positions and time points to the server,
 - b. the medical device determining, using the operations sensor, a time point for when the medical device has been in use (third time point),
 - c. the medical device, using its cellular radio transceiver, establishing a data connection to the server and transferring the third time point to the server,
 - d. the server selecting, among at least the first time point and the second time point, the time point that is closest to the third time point,
 - e. the server using the position and the time point selected in step d) to retrieve position-specific data selected from the group consisting of a weather or climate parameter, air pressure, humidity, temperature, traffic, air pollution, air particle density, air pollen density, person density and altitude above sea level, for the position and the time point, then
 - f. the server using the position-specific data from step e) to determine whether the medical device should be serviced or replaced.
2. The method of claim 1 where step c) is carried out by the medical device at least at predetermined time intervals.

3. The method of claim 1 where step c) is automatically carried out by the medical device after the medical device has been in use.
4. The method of claim 1 where step f) involves the server applying a decision rule, said decision rule being generated by applying machine learning to a data set, said data set comprising previously collected position-specific data for comparable medical devices, said data set also comprising data about previous failures of the comparable portable medical devices.
5. The method of claim 1 where the portable medical device is a device for injection of a medicament.
6. The method of claim 1 where the client device determines the geographical positions and transfers the geographical positions and time points to the server via a data connection provide by the cell network.
7. A system comprising a portable or wearable medical device being carried by a user and a client device carried by the same user, a cell network and a server, where the medical device has an operations sensor, a processing unit and a memory and a cell phone transceiver integrated in a housing and is able to store information in the memory about time points for operation events, and where the client device is configured to determine and store the geographical position for the client device for at least a first time point and a second time point, and transfer these positions and time points to the server via a data connection, or the cell network is configured to determine the position of the client device for at least a first time point and a second time point and to provide the positions and time points to the server, the medical device being configured to determine, using the operations sensor, a time point for when the medical device has been in use (third time point), and configured to, using its cellular radio transceiver, establishing a data connection to the server and transferring the third time point to the server,

the server being configured to receive at least the first, second and third time points and to select, among at least the first time point and the second time point, the time point that is closest to the third time point and to use the position of the selected time point to retrieve position specific data selected from the group consisting of a weather or climate parameter, air pressure, humidity, temperature, traffic, air pollution, air particle density, air pollen density, person density and altitude above sea level for the for the time point, and to use the position-specific data to determine whether the medical device should be serviced or replaced,

where the client device comprises instructions that causes the client device to determine the position at least at predetermined time intervals or where the cell network provides the position of mobile phone cell network to server at predetermined time intervals.

8. The system of claim 7 where the medical device is configured to establish a data connection to the server and transfer the third time point to the server at least at predetermined time intervals.
9. The system of claim 7 where the medical device is configured to establish a data connection to the server and transfer the third time point to the server automatically after the medical device has been in use.
10. The system of claim 7 where the determination step of the server involves the server applying a decision rule, said decision rule being generated by applying machine learning to a data set, said data set comprising previously collected position-specific data for comparable medical devices, said data set also comprising data about previous failures of the comparable portable medical devices.
11. The system of claims 7 where the portable medical device is a device for injection of a medicament.