determine the highest, the lowest, the average or the median of a plurality of kinds of degradation levels as a final degradation level of the secondary battery 300. Comprehensive determination of the degradation level of a secondary battery 300 from degradation levels obtained from a plurality of aspects in this manner enables more reasonable calculation of the degradation level.

[0092] Permissible values of the degradation level of a secondary battery 300 (degradation thresholds) are considered as varying depending on users of the secondary battery 300. For example, a user A4 is assumed to use a secondary battery 300 with a degradation level of 0 to 10(%), and replaces the secondary battery 300 when the degradation level becomes higher than 10(%). A user A5 is assumed to use a secondary battery 300 with a degradation level of 0 to 30(%). In this case, the secondary battery 300 with a degradation level higher than 10(%) that can no longer be used by the user A4 is usable for the user A5. The aforementioned matching unit may notify the user A5 that the secondary battery 300 of the user A4 is available at the replacement timing of the secondary battery 300 of the user A4 or that the secondary battery 300 of the user A4 will be available at a timing when the replacement thereof is expected. Alternatively, the matching unit may deliver the secondary battery 300 that is no longer used by the user A4 to the user A5. When the user A4 replaces the secondary battery 300, the matching unit may search for a user who can use

CLAIMS

1. A secondary battery management device connected with electronic equipment via a communication network, the electronic equipment using a secondary battery as a driving power supply, the secondary battery management device comprising:

a performance information acquiring unit to acquire performance information of the secondary battery from the electronic equipment;

a degradation measuring unit to measure a degradation level of performance of the secondary battery during a predetermined unit period;

a degradation estimating unit to estimate a degradation level of the secondary battery at a predetermined future time point; and

a use history acquiring unit to acquire use history from a plurality of pieces of electronic equipment, the use history being information indicating usage of each of the pieces of electronic equipment used by users, wherein

the degradation estimating unit refers to the degradation level of the performance and the use history of each of a plurality of secondary batteries, and estimates a degradation level of a secondary battery used by first electronic equipment at a predetermined future time point on the basis of use history of the first electronic equipment.

2. The secondary battery management device according to claim 1, further comprising:

a degrading behavior specifying unit to refer to a degradation level of performance and use history of each of the secondary batteries, and specify a degrading behavior being usage of the electronic equipment when the degradation level per unit time of the secondary battery is a predetermined value or higher.

3. The secondary battery management device according to claim 1, further comprising:

an equipment ID acquiring unit to acquire an equipment ID identifying a piece of electronic equipment among a plurality of pieces of electronic equipment, wherein

the degradation estimating unit refers to the degradation level of performance and an equipment ID associated with each of a plurality of secondary batteries, and estimates a degradation level of a secondary battery used by second electronic equipment at a predetermined future time point on the basis of the equipment ID of the second electronic equipment.

4. The secondary battery management device according to claim 1, wherein

the performance information acquiring unit acquires performance information of each of a plurality of cells constituting the secondary battery,

the degradation measuring unit measures a degradation level of performance of each of the cells, and

the degradation estimating unit estimates a degradation level of each of the cells.

5. The secondary battery management device according to claim 1, further comprising:

a user information acquiring unit to acquire user information of each of users of a plurality of pieces of electronic equipment from the pieces of electronic equipment, wherein

the degradation estimating unit refers to a degradation level and user information of each of a plurality of secondary batteries, and estimates a degradation level of a secondary battery used by third electronic equipment at a predetermined future time point on the basis of user information of the third electronic equipment.

6. The secondary battery management device according to claim 1, further comprising:

a replacement estimating unit to estimate replacement timing of a secondary battery of each of the pieces of electronic equipment on the basis of estimation of degradation

levels of secondary batteries; and

a replacement notifying unit to notify an external device of the number of secondary batteries to be replaced at a predetermined future time point among a plurality of pieces of electronic equipment.

7. The secondary battery management device according to claim 1, wherein

the performance information acquiring unit acquires, as the performance information, a discharge capacity of the secondary battery, and

the degradation measuring unit measures, as the degradation level, a decrease in the discharge capacity during the unit period.

8. A secondary battery management program causing a computer to implement:

a function of acquiring performance information of a secondary battery from electronic equipment using the secondary battery as a driving power supply;

a function of measuring a degradation level of performance of the secondary battery during a predetermined unit period;

a function of acquiring use history from the electronic equipment, the use history being information indicating usage

of the electronic equipment used by a user;

a function of estimating a degradation level of the secondary battery at a predetermined future time point on the basis of the degradation level of the performance of the secondary battery and the use history.

9. The secondary battery management device according to claim 1, wherein

the use history acquiring unit acquires, as the use history, information indicating driving history of an electric vehicle from the electric vehicle, the electric vehicle using the secondary battery as a driving power source.