[0009]

However, since there is a limit in a memory capacity in the IC card, the IC card cannot record many kinds of history information. Therefore, there is proposed a method of recording only a frequency (a counter value) for each category of behavior such as purchase (see, for example, Patent Literature 5).

[0010]

As a third method, there is proposed a method in which an IC card records attribute information concerning the behavior of a user that changes as time elapses.

[0011]

The method of granting points for, for example, purchase of commodities is effective as a marketing method for improving royalty of users. Therefore, in order to more continuously guiding users to a shop, there is proposed the third method for changing a point return rate or a service level according to an increase or a decrease in a purchase frequency of a user (see, for example, Patent Literature 6). This method is a method of calculating a score added with a purchase frequency according to attribute information concerning the behavior of a user up to the last time, purchase information of the user of this time, and the like and a simple recurrence formula and providing a service according to the calculated score.

[0012]

communicate with each other and a date and time when the second terminals and the IC card communicate with each other, calculates, on the basis of the information transmitted from the second terminals, a second score value indicating a frequency of the communication between the second terminal and the IC card, generates second attribute data including the second score value and the second identifier, when a total number of the first attribute data and the second attribute data exceeds a predetermined number, compares the updated first score value and the calculated second score value, and, when the second score value is large as a result of the comparison, retains the second attribute data.

[Claim 2]

The IC card system according to claim 1, wherein

the communication between the terminal and the IC card is classified into a plurality of groups,

the predetermined number is a number of the attribute data included in each group, and

the IC card allocates a first group of the groups to the first attribute data and, when the second attribute data is allocated with the first group and a total number of the first attribute data and the second attribute data exceeds the predetermined number, compares the updated first score value and the calculated second score value.

[Claim 3]

transmitting the second identifier and a date and time when the second terminal and the IC card communicate with each other to the IC card;

the IC card updating the first score value on the basis of the date and time when the first terminal and the IC card communicate with each other and a date and time when the second terminals and the IC card communicate with each other;

the IC card calculating, on the basis of the information transmitted from the second terminals, a second score value indicating a frequency of the communication between the second terminal and the IC card;

the IC card generating second attribute data including the second score value and the second identifier;

when a total number of the first attribute data and the second attribute data exceeds a predetermined number, the IC card comparing the updated first score value and the calculated second score value; and

when the second score value is large as a result of the comparison, the IC card retaining the second attribute data.

[Claim 10]

The data collecting method according to claim 9, wherein

the communication between the terminal and the IC card is classified into a plurality of groups,

the predetermined number is a number of the attribute data included in each group, and

[0009]

However, since there is a limit in a memory capacity in the IC card, the IC card cannot record many kinds of history information. Therefore, there is proposed a method of recording only a frequency (a counter value) for each category of behavior such as purchase (see, for example, Patent Literature 5).

[0010]

As a third method, there is proposed a method in which an IC card records attribute information concerning the behavior of a user that changes as time elapses.

[0011]

The method of granting points for, for example, purchase of commodities is effective as a marketing method for improving loyalty of users. Therefore, in order to more continuously guiding users to a shop, there is proposed the third method for changing a point return rate or a service level according to an increase or a decrease in a purchase frequency of a user (see, for example, Patent Literature 6). This method is a method of calculating a score added with a purchase frequency according to attribute information concerning the behavior of a user up to the last time, purchase information of the user of this time, and the like and a simple recurrence formula and providing a service according to the calculated score.

[0012]

communicate with each other and a date and time when the second terminals and the IC card communicate with each other, calculates, on the basis of the information transmitted from the second terminals, a second score value indicating a frequency of the communication between the second terminal and the IC card, generates second attribute data including the second score value and the second identifier, when a total number of the first attribute data and the second attribute data exceeds a predetermined number, compares the updated first score value and the calculated second score value, and, when the second score value is larger than the first score value as a result of the comparison, retains the second attribute data.

[Claim 2]

The IC card system according to claim 1, wherein

the communication between the terminal and the IC card is classified into a plurality of groups,

the predetermined number is a number of the attribute data included in each group, and

the IC card allocates a first group of the groups to the first attribute data and, when the second attribute data is allocated with the first group and a total number of the first attribute data and the second attribute data exceeds the predetermined number, compares the updated first score value and the calculated second score value.

[Claim 3]

transmitting the second identifier and a date and time when the second terminal and the IC card communicate with each other to the IC card;

the IC card updating the first score value on the basis of the date and time when the first terminal and the IC card communicate with each other and a date and time when the second terminals and the IC card communicate with each other;

the IC card calculating, on the basis of the information transmitted from the second terminals, a second score value indicating a frequency of the communication between the second terminal and the IC card;

the IC card generating second attribute data including the second score value and the second identifier;

when a total number of the first attribute data and the second attribute data exceeds a predetermined number, the IC card comparing the updated first score value and the calculated second score value; and

when the second score value is larger than the first score value as a result of the comparison, the IC card retaining the second attribute data.

[Claim 10]

The data collecting method according to claim 9, wherein

the communication between the terminal and the IC card is classified into a plurality of groups,

the predetermined number is a number of the attribute data included in each group, and