

CLAIMS

What is claimed is:

1. A resource allocation method, comprising:

obtaining resource limit information and time period information of a network
5 resource corresponding to target future duration, wherein the time period information
comprises a first ranking of a plurality of time period types comprised in the target
future duration based on resource return rates, wherein a resource return is positive
feedback related to a user;

obtaining group estimation information by performing grouping evaluation on the
10 plurality of user groups, comprising , for each time period type i , each user group j , and
each candidate share k , an estimated resource return $p_{i,j,k}$ determined when the user
group j obtains k network resources for the time period type i ; and

determining, under a plurality of constraint conditions, a resource share allocated
to each user group in a time period of each time period type based on the group
15 estimation information with a goal of maximizing a sum of estimated resource returns
in the target future duration, wherein the plurality of constraint conditions comprise: a
total allocated resource share satisfies the resource limit information, and resource
allocation for each time period type satisfies the first ranking.

2. The method according to claim 1, wherein the network resource is a deduction
20 request for a borrowing user, a single resource share corresponds to sending a deduction
request once, and the resource return rate is a probability of successful deduction.

3. The method according to claim 2, further comprising:

determining a current time period type corresponding to a current time period;
and

25 sending a deduction request to each user group based on a determined resource
share allocated to the user group in the current time period type.

4. The method according to any one of claims 1-3, wherein the time period is day,
and the plurality of time period types comprise payday, workday, and rest day.

5. The method according to claim 1, wherein the plurality of user groups have a
30 second ranking based on users' resource return rates; and the plurality of constraint
conditions further comprise: resource allocation for each user group satisfies the second
ranking.

6. The method according to claim 1 or 5, wherein the plurality of user groups are obtained by:

using a scoring model to score the resource return rate for each user in a total user set; and

5 separately classifying the users into the plurality of user groups based on a score range.

7. The method according to claim 1, wherein the resource limit information comprises a total resource share amount; and

10 that the total allocated resource share satisfies the resource limit information comprises: the total allocated resource share is less than or equal to the total resource share amount.

8. The method according to claim 1, wherein the resource limit information comprises a total resource share amount and a reserved share ratio for a total user set formed by the plurality of user groups; and

15 that the total allocated resource share satisfies the resource limit information comprises: the total allocated resource share is less than or equal to an available resource share, wherein the available resource share is a difference between the total resource share amount and a total reserved share amount, and the total reserved share amount is determined based on a total quantity of users in the total user set and the
20 reserved share ratio.

9. The method according to claim 8, further comprising: obtaining a predetermined frequency parameter, wherein the frequency parameter is related to a resource coverage frequency at which a user obtains the network resource; and

25 the plurality of constraint conditions further comprise: for any time period type, a ratio of a quantity of covered users allocated with the network resource in a single time period corresponding to the time period type to a total quantity of users is greater than a specified target threshold, wherein the target threshold depends on a product of the frequency parameter and the reserved share ratio.

10. The method according to claim 1, wherein the resource limit information
30 comprises a resource share upper limit and a resource share lower limit specified for each time period type; and

the plurality of constraint conditions further comprise: for any time period type, a sum of single time period shares allocated to the plurality of user groups in a single time

period corresponding to the time period type is not less than a resource share lower limit for the time period, and is not greater than a corresponding resource share upper limit.

11. The method according to claim 1, wherein the obtaining group estimation information comprises obtaining the group estimation information based on a historical record by using a statistical model.

12. The method according to claim 1, wherein the determining a resource share allocated to each user group in a time period of each time period type comprises:

determining the allocated resource share by using a linear integer programming algorithm.

13. A resource allocation apparatus, comprising:

an acquisition unit, configured to obtain resource limit information and time period information of a network resource corresponding to target future duration, wherein the time period information comprises a first ranking of a plurality of time period types comprised in the target future duration based on resource return rates, wherein a resource return is positive feedback related to a user;

a group estimation unit, configured to obtain group estimation information by performing grouping evaluation on the plurality of user groups, comprising , for each time period type i , each user group j , and each candidate share k , an estimated resource return $p_{i,j,k}$ determined when the user group j obtains k network resources for the time period type i ; and

a share determining unit, configured to determine, under a plurality of constraint conditions, a resource share allocated to each user group in a time period of each time period type based on the group estimation information with a goal of maximizing a sum of estimated resource returns in the target future duration, wherein the plurality of constraint conditions comprise: a total allocated resource share satisfies the resource limit information, and resource allocation for each time period type satisfies the first ranking.

14. A computer readable storage medium that stores a computer program, wherein when the computer program is executed in a computing device, the computing device performs the method according to any one of claims 1 to 12.

15. A computing device, comprising a memory and a processor, wherein the memory stores executable code, and when executing the executable code, the processor implements the method according to any one of claims 1 to 12.