

Claims

1. A method for offline interaction based on augmented reality, the method comprising:

obtaining, by an augmented reality server, consumption data of a user at a target place, wherein the consumption data comprises a consumption amount;

allocating, by the augmented reality server, a quantity of virtual resources corresponding to the user based on the consumption amount;

accumulating, by the augmented reality server, the quantity of virtual resources allocated to the user, to update a total quantity of virtual resources in a virtual resource account of the user;

updating, by the augmented reality server, a total quantity of virtual resources accumulated in a virtual resource pool of the target place and a total value of the virtual resources accumulated in the virtual resource pool of the target place, wherein the total quantity and the total value of the virtual resources accumulated in the virtual resource pool are based on the quantity of virtual resources allocated to the user and quantities of virtual resources allocated to other users;

delivering, by the augmented reality server, a corresponding update message to an augmented reality client device, the corresponding update message triggering the augmented reality client device to synchronously update a quantity of displayed virtual resources in the virtual resource account of the user based on the quantity of virtual resources allocated to the user;

in response to an image scanning operation performed by the augmented reality client device in an offline environment of the target place, determining, by the augmented reality server, whether a predetermined identifier corresponding to the target place is identified from image information of a scanned real-world image obtained through the image scanning operation; and

in response to determining that the predetermined identifier corresponding to the target place is identified from the image information obtained through the image scanning operation, delivering, by the augmented reality server to the augmented reality client device, virtual data comprising the updated total value of the virtual resources in the virtual resource pool of the target place,

wherein the augmented reality client device is configured to perform augmented display of the virtual data by overlaying and combining the virtual data with the image

information at a location corresponding to the predetermined identifier in the scanned real-world image.

2. The method according to claim 1, wherein the virtual data comprises a total value of the virtual resources in the virtual resource pool, a unit value of the virtual resources in the virtual resource pool, and change data of the unit value.

3. The method according to claim 2, wherein the method further comprises:
calculating the unit value of the virtual resources in the virtual resource pool based on the total quantity of the virtual resources in the virtual resource pool and a total value to be allocated corresponding to the target place;
recording the change data of the unit value when the unit value of the virtual resources in the virtual resource pool changes; and
calculating the total value of the virtual resources in the virtual resource pool based on the calculated unit value and the quantity of virtual resources in the virtual resource pool.

4. The method according to claim 3, further comprising:
receiving, by the augmented reality server, a first virtual resource exchange request sent by the user by using the augmented reality client device, wherein the first virtual resource exchange request comprises a quantity of virtual resources to be exchanged and identification information of the virtual resources to be exchanged by the user;
calculating, by the augmented reality server, a total value of the virtual resources to be exchanged based on the first virtual resource exchange request;
allocating, by the augmented reality server, virtual vouchers having a same total value as the total value of the virtual resources to be exchanged to the user;
receiving, by the augmented reality server a second virtual resource exchange request sent by the user by using the augmented reality client device, wherein the second virtual resource exchange request comprises a quantity of virtual vouchers to be exchanged by the user;
calculating, by the augmented reality server, a quantity of virtual resources having the same total value as a value of the quantity of virtual vouchers to be exchanged based on the second virtual resource exchange request; and

allocating, by the augmented reality server, the corresponding quantity of virtual resources to the user.

5. The method according to any one of claims 2-4, wherein:
the virtual resource comprises a virtual asset corresponding to the target place;
the total value to be allocated comprises a total revenue of the target place;
a virtual voucher comprises a virtual currency;
a first virtual resource exchange request comprises a virtual asset purchase request; and
a second virtual resource exchange request comprises a virtual asset selling request.

6. The method according to any one of the preceding claims, the method further comprising:

accumulating, by the augmented reality server, virtual resources allocated to different users in the virtual resource pool of the target place; and

selecting, by the augmented reality server, an offline target place by horizontally comparing and analyzing total quantities of the virtual resources accumulated in virtual resource pools of different target places.

7. The method according to claim 6, wherein the virtual resource pool comprises a virtual asset pool created for the target place, and wherein the virtual resources allocated to the different users are accumulated in the virtual resource pool.

8. The method according to any one of the preceding claims, the method further comprising:

recalculating the virtual data comprising the updated total value of the virtual resources in the virtual resource pool of the target place.

9. The method according to any one of the preceding claims, further comprising:
uploading, by the augmented reality client device, the consumption data of the user at the target place to the augmented reality server, wherein the consumption data comprises the

consumption amount, so that the augmented reality server allocates the corresponding quantity of virtual resources to the user based on the consumption amount;

performing the image scanning operation in the offline environment of the target place on the predetermined identifier of the target place using an image scanning function of the augmented reality client device performed by the user in the offline environment of the target place;

initiating image recognition on the image information of the scanned real-world image obtained through the image scanning operation;

in response to determining that the predetermined identifier corresponding to the target place is identified from the image information at the augmented reality server, receiving the virtual data delivered by the augmented reality server and comprising the updated total value of the virtual resources in the virtual resource pool of the target place; and

performing the augmented display of the received virtual data by overlaying and combining the virtual data with the image information at the location corresponding to the predetermined identifier in the scanned real-world image.

10. The method according to claim 9, wherein the virtual data comprises a total value of the virtual resources in the virtual resource pool, a unit value of the virtual resources in the virtual resource pool, and change data of the unit value.

11. The method according to claim 10, wherein performing the augmented display on the received virtual data at the location corresponding to the predetermined identifier in the scanned real-world image comprises:

creating a visual graph corresponding to a change rule of the unit value based on the change data of the unit value included in the virtual data; and

performing the augmented display on the total value of the virtual resources in the virtual resource pool included in the virtual data, the unit value of the virtual resources in the virtual resource pool included in the virtual data, and the created visual graph at the location corresponding to the predetermined identifier in the scanned real-world image.

12. The method according to claim 9, wherein a user interface of the augmented reality client device comprises a first exchange entry and a second exchange entry corresponding to the virtual resources.

13. The method according to claim 12, further comprising:

 sending a first virtual resource exchange request to the augmented reality server in response to a trigger operation performed by the user on the first exchange entry, wherein the first virtual resource exchange request comprises a quantity of virtual resources to be exchanged and identification information of the virtual resources to be exchanged by the user, and wherein the augmented reality server calculates total value of the virtual resources to be exchanged based on the first virtual resource exchange request;

 allocating virtual vouchers having a same total value as the total value of the virtual resources to be exchanged to the user;

 sending a second virtual resource exchange request to the augmented reality server in response to a trigger operation performed by the user on the second exchange entry, wherein the second virtual resource exchange request comprises a quantity of virtual vouchers to be exchanged by the user, and wherein the augmented reality server calculates a quantity of virtual resources having the same total value as a value of the quantity of the virtual vouchers to be exchanged based on the second virtual resource exchange request; and

 allocating the corresponding quantity of virtual resources to the user.

14. An apparatus for offline interaction based on augmented reality, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 13.