

Claims

1. A smart meal ordering method, comprising:
 - conducting body sensing of a diner by a body sensing hardware of a smart meal ordering device, wherein conducting body sensing of the diner comprises the smart meal ordering device sensing that the diner has taken a seat at a dining table;
 - outputting a meal ordering interface by a display screen of the smart meal ordering device in response to sensing that the diner has taken a seat at the dining table;
 - obtaining information of one or more dishes selected by the diner on the meal ordering interface;
 - sensing that the diner has left the seat at the dining table; and
 - in response to sensing that the diner has left the seat at the dining table, sending a total price of the one or more dishes and identification information of the smart meal ordering device to a server that automatically carries out, based on a pre-established bundling relationship between identification information of the smart meal ordering device and a payment account of the diner, a debit settlement corresponding to the total price from the payment account of the diner.
2. The method according to Claim 1, wherein:
 - a graphic code generated based on the identification information of the smart meal ordering device is attached to the smart meal ordering device; and
 - the graphic code is configured for scanning by a client device of the diner and for establishing by the client device or the server, the bundling relationship between the identification information identified from the graphic code and the payment account of the diner.
3. The method according to Claim 1, further comprising: before sending the total price and the identification information to the server:
 - collecting a facial image of the diner by a camera configured to capture facial images of diners seated at the dining table; and
 - uploading the collected facial image and the identification information of the smart meal ordering device to the server that establishes the bundling relationship between the identification information and the payment account of the diner.
4. The method according to Claim 3, further comprising:
 - obtaining user information of the diner pushed by the server, corresponding to the payment account; and

using the display screen to output a prompt, wherein the prompt comprises the obtained user information.

5. The method according to Claim 1, further comprising:
 - identifying a hovering gesture made by the diner;
 - determining whether the identified hovering gesture matches a pre-set interactive gesture; and
 - triggering an interactive operation corresponding to the interactive gesture if the identified hovering gesture matches a pre-set interactive gesture.
6. The method according to Claim 1, wherein the body sensing of the diner by the body sensing hardware comprises:
 - sensing a distance between the diner and the dining table by the body sensing hardware;
 - determining that the diner has taken the seat if the distance is less than or equal to a threshold value; and
 - determining that the diner has left the seat if the distance is greater than the threshold value.
7. The method according to Claim 1, further comprising:
 - recording a first number of seated diners at the dining table sensed by the body sensing hardware;
 - obtaining a second number of seated diners at the dining table identified by a camera;
 - comparing the first number to the second number; and
 - revising the first number based on the second number when the first number and the second number are not the same.
8. The method according to Claim 1, wherein in response to sensing that the diner has left the seat, sending the total price of the dishes and the identification information of the smart meal ordering device to the server comprises:
 - in response to sensing that a diner has left a seat at the dining table, determining whether a number of individuals having left their seats at the dining table is a number of diners at the dining table; and
 - if the number of individuals having left their seats is the number of diners, sending the total price of the dishes and the identification information of the smart meal ordering device to the server.
9. The method according to Claim 1, further comprising:

using a moment when the diner takes the seat as a starting moment, calculating a dining time at the dining table;
determining whether the dining time has reached a threshold value; and
if the dining time has reached a threshold value, sending the total price of the dishes and the identification of the smart meal ordering device to the server.

10. The method according to Claim 1, wherein:

the server is caused to transact payment for the dishes from an account of the diner to pay the total price.

11. The method according to Claim 1, wherein the smart meal ordering device comprises the dining table, wherein the dining table is configured to sense that the diner has taken the seat at the dining table and that the diner has left the seat at the dining table.

12. A smart meal ordering device, comprising:

a sensor configured to conduct body sensing of a diner to:

sense when the diner has taken or left a seat at a dining table; and

sense when the diner has left the seat at the dining table;

a display screen configured to output a meal ordering interface in response to the sensor sensing that the diner has taken the seat at the dining table, and obtain information of one or more dishes selected by the diner on the meal ordering interface; and

a processor configured to, in response to the sensor sensing that the diner has left the seat at the dining table, send a total price of the one or more dishes and identification information of the smart meal ordering device to a server that automatically carries out, based on a pre-established bundling relationship between identification information of the smart meal ordering device and a payment account of the diner, a debit settlement corresponding to the total price from the payment account of the diner.

13. The device according to Claim 12, further comprising:

a graphic code generated based on the identification information of the smart meal ordering device, wherein:

the graphic code is configured for scanning by a client device of the diner and for establishing by the client device or the server the bundling relationship between the identification information identified from the graphic code and the payment account of the diner.

14. The device according to Claim 12, further comprising:

a camera configured to collect a facial image of the diner when the diner sits at the dining table, wherein:

the processor is further configured to, before sending the total price and the identification information to the server, upload the collected facial image and the identification information of the smart meal ordering device to the server that establishes the bundling relationship between the identification information and the payment account of the diner.

15. The device according to Claim 14, wherein:

the processor is further configured to obtain user information of the diner pushed by the server, corresponding to the payment account; and

the display screen is further configured to output a prompt, wherein the prompt comprises the obtained user information.

16. The device according to Claim 12, further comprising:

another sensor configured to identify a hovering gesture made by the diner; and
the processor is further configured to determine whether the identified hovering gesture matches a pre-set interactive gesture, and trigger an interactive operation corresponding to the interactive gesture if the identified hovering gesture matches a preset interactive gesture.

17. The device according to Claim 16, wherein:

the another sensor comprises an least one of infrared touch-control frame or another camera.

18. The device according to Claim 12, wherein:

to conduct body sensing of the diner, the sensor is configured to sense a distance between the diner and the dining table by the body sensing hardware; and

the processor is configured to determine that the diner has taken the seat if the distance is less than or equal to a threshold value, and determine that the diner has left the seat if the distance is greater than the threshold value.

19. The device according to Claim 12, wherein the sensor, the display screen, and the processor are disposed in the dining table.

20. The device according to Claim 12, wherein the sensor comprises at least one of an infrared body sensor or an ultrasonic body sensor.