The invention relates to a cooking information providing system and method. It comprises a cooking appliance, a reader, a communication module, a control unit, a display, and a terminal. The cooking appliance is equipped with an RF tag. The terminal is connected to the cooking appliance through a communication module. The reader reads the information from the RF tag and provides it to the terminal. The control unit processes the information and provides it to the user. The system can be used to diversify the information provided by a book, thereby improving the satisfaction of a purchaser of the book.

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Publication: 2008084915 A1

Title: COOK BOOK, FOOD INFORMATION PROVISION SYSTEM AND METHOD

Abstract: Provided is a food information providing system. The food information providing system includes a first RF tag, a second RF tag, a terminal, and a server. At least information of food is recorded in the first RF tag. At least spec information of the cooking appliance is recorded in the second RF tag. An RF reader is mounted in the terminal such that at least spec information of the cooking appliance and the food information are input from the first RF tag and the second RF tag. The server transmits operating information of the cooking appliance to the terminal with reference to the food information and the spec information of the cooking appliance transmitted from the terminal. Therefore, a user can obtain the latest information of food in real-time and can cook more conveniently by diversification of the range of food information provided to a user. Also, when sufficient information cannot be provided due to space limitation of books, the range of use for a book can be diversified to provide more information, thereby improving satisfaction of a purchaser of the book.
Description

COOK BOOK, FOOD INFORMATION PROVISION SYSTEM AND METHOD

Technical Field
[1] The present disclosure relates to a cookbook, food information providing system and method, and more particularly, to a system that enables a purchaser of a book to conveniently obtain food-related information.

Background Art
[2] A user usually cooks food based on experience. Alternatively, a user may learn a recipe from books to cook foods.

[3] However, since the user obtains food information from limited resources, the obtained food information may not include specific information, such as preference for a food, conditions of a cooked food, or a specific example of cooking a food, due to space limitation of books. Therefore, in cooking with reference to books, a user may cook by guess because of insufficient information of the book.

[4] A user may obtain food information through the Internet. However, a user may feel inconvenience because they should go to, e.g., a study far from the kitchen to learn a recipe through the Internet.

Disclosure of Invention

Technical Problem
[5] Embodiments provide a cookbook, food information providing system and method that enable a user to obtain food-related information in real-time.

[6] Embodiments also provide a cookbook, food information providing system and method that diversify the range of food information to enable a user to easily obtain various information related to foods.

[7] Embodiments also provide a cookbook, food information providing system and method using the cookbook, which improve the range of use for the book to provide more information to a user when sufficient information cannot be provided due to space limitation, thereby increasing the satisfaction of a purchaser of the book.

Technical Solution
[8] In one embodiment, a food information providing system include: at least one RF tag where at least network address information is recorded; a terminal where an RF reader module for reading information recorded in the RF tag is mounted; and a server connected to the terminal to provide food information to the terminal.

[9] In another embodiment, a cookbook includes: a sheet; a food information display unit disposed on one surface of the sheet; an RF tag inserted into the sheet; and a
conductor disposed on one surface of the RF tag such that information of the RF tag is not radiated.

[10] In a further embodiment, a food information provision method includes: reading information recorded in an RF tag mounted in a sheet using a terminal, the RF tag being aligned with food information printed on one surface of the sheet; connecting a server to a network using the information of the RF tag; and downloading food information corresponding to the information of the RF tag from the server connected to the network.

[11] In a still further embodiment, a food information providing system includes: an RF tag where at least network address information and information of a specific food are recorded; a terminal where an RF reader module for reading information recorded in the RF tag is mounted; and a server connected to the terminal to provide food information to the terminal.

[12] In an even further embodiment, a food information providing system includes: a first RF tag where at least information of food is recorded; a second RF tag where at least spec information of a cooking appliance is recorded; a terminal where an RF reader is mounted such that at least spec information of the cooking appliance and the food information are input from the first RF tag and the second RF tag; and a server transmitting operating information of the cooking appliance to the terminal with reference to the food information and the spec information of the cooking appliance transmitted from the terminal.

**Advantageous Effects**

[13] According to the present disclosure, a user can obtain the latest information of food in real-time and can cook more conveniently by diversification of the range of food information provided to a user. Also, when sufficient information cannot be provided due to space limitation of books, the range of use for a book can be diversified to provide more information, thereby improving satisfaction of a purchaser of the book.

**Brief Description of the Drawings**

[14] Fig. 1 is a structural view of a food information providing system according to a first embodiment of the present disclosure.

[15] Fig. 2 is a perspective view of a cookbook according to the first embodiment of the present disclosure.

[16] Fig. 3 is a cross-sectional view of one page of the cookbook taken along a line I-I' of Fig. 2 according to the first embodiment of the present disclosure.

[17] Fig. 4 is a table of information included in a first RF tag according to the first embodiment of the present disclosure.

[18] Fig. 5 is a flow chart illustrating a food information provision method according to
the first embodiment of the present disclosure.

[19] Fig. 6 is a structural view of a food information providing system according to a second embodiment of the present disclosure.

[20] Fig. 7 is a table of information included in a second RF tag according to the second embodiment of the present disclosure.

[21] Fig. 8 is a flow chart illustrating a food information provision method according to the second embodiment of the present disclosure.

Mode for the Invention

[22] Reference will now be made in detail to the embodiments of the present disclosure, examples of which are illustrated in the accompanying drawings.

[23] A food information providing system according to embodiments is configured as an RF tag reading system including an RF tag and an RF reader. In operation of the RF tag reading system, when a reader requests a tag to transmit tag data, the tag transmits tag data as a radio frequency (RF) to the reader. In the embodiments, the RF tag is provided in offline information medium such as books and the RF reader is provided in a terminal, however, the embodiments are not limited thereto.

[24] <First embodiment

[25] Fig. 1 is a structural view of a food information providing system according to a first embodiment of the present disclosure.

[26] Referring to Fig. 1, the food information providing system includes an RF tag 1, a terminal 2, a server 4, and a network 3. Information of a specific food is recorded in the RF tag 1. An RF reader system for reading food information recorded in the RF tag 1 is mounted in the terminal 2. The server 4 receives the food information from the terminal 2 to generate reply information. The network 3 connects the server 4 with the terminal 2.

[27] In detail, the RF tag 1 is provided in a cool book including a plurality of sheets. Fig. 2 is a perspective view of a cookbook, and Fig. 3 is a cross-sectional view of one page of the cookbook taken along a line I-I' of Fig. 2, according to the first embodiment of the present disclosure.

[28] Referring to Figs. 2 and 3, an image of a specific food is illustrated in a food information display unit 51 included in each page of a cookbook 5. Therefore, a user can see an image of a desired food through the food information display unit 51. An RF tag 54 is mounted inside a portion of a page that the food information display unit 51 is disposed.

[29] A page of the cookbook 5, in particular the food information display unit 51, includes a first sheet 52, the RF tag 54, a conductor 55, and a second sheet 53. The first sheet 52 and the second sheet 53 form an upper surface and a lower surface of each
page, respectively. Food information is recorded in the RF tag 54. The conductor 55 blocks the lower surface of the RF tag 54 to prevent a high frequency generated in the RF tag 54 from being transferred to the lower surface of the page.

[30] In operation of the cookbook 5, since a provision disposition of the RF tag 54 is aligned with the food information display unit 51, a user can read the food information recorded in the RF tag 54 by bringing the terminal 2 close to the image of food.

[31] The cookbook 5 includes a plurality of sheets. Therefore, when an RF reader is brought close to the RF tag 54, food information may be read from an RF tag mounted in a previous page. In order to prevent this, the conductor 55 is mounted under the RF tag 54 mounted in each page so as to read only information of the RF tag 54 mounted in a page designated by a user. The RF tag 54 mounted in any one page radiates a high frequency in only an upward direction due to the conductor 55. The RF tag 54 mounted in a page after the page desired by a user is blocked by the conductor 55 of the current page.

[32] A user can always read information of an image of a desired food included in a desired page by means of the configuration of the cookbook 5.

[33] Referring to Fig. 1, again, the RF tag 1 includes an IC chip 11 and an antenna 12. At least information related to food is recorded in the IC chip 11. The antenna 12 radiates the information recorded in the IC chip 11 as a high frequency. Power may be received from the terminal 2 through the antenna 12.

[34] The terminal 2 includes an antenna 21 that exchanges a high frequency signal with the RF tag 1 and a data read unit 22 that processes information received through the antenna 21. Since the antenna 21 and the data read unit 22 serve as an RF reader, they, as a whole, may be referred to as an RF reader module. The terminal 2 further includes a control unit 24 that entirely controls a system of the terminal 2, a display 25 that displays the condition and other information of the terminal 2, and a communication module 23 that allows the terminal 2 to communicates with other external system.

[35] The communication module 23 is connected to the server 4 through the network 3 to exchange data with the server 4.

[36] Hereinafter, an operation of the food information providing system will be described.

[37] At least information related to food is included in the IC chip 11 of the RF tag 1, and the information is transmitted to the terminal 2 through the antenna 12. Here, since the RF tag is aligned with the food information display unit 51 of the cookbook 5, a user can easily read the desired food information.

[38] The information included in the RF tag 1 is illustrated in Fig. 4.

[39] Referring to Fig. 4, a start code field includes a code representing start of data and an end code field includes a code representing end of data. An authentication code
field includes an authentication code of the terminal 2 reading information and a code used for authentication of the RF tag 1 in the server 4. An error code field includes a code for detecting generation of error in data transmission. Each field includes a code fundamentally necessary for an operation of an RF tag reading system and may be changed depending on specific conditions.

Besides the above-mentioned information, the RF tag of the food information providing system includes layer information of food, address information of a network where the server 4 is located, and a food ID in respective address.

In detail, the layer information of food is configured as a plurality of layers that have a lower menu. For example, when the food is a Western food, the layer is represented as [0002], when the Western food is a pizza, the layer is represented as [0001], when the Pizza is a pan pizza, the layer is represented as [0002], and when the pan pizza is a vegetable pizza, the layer is represented as [0001]. As a result, the layer information includes information having layers of [0002/0001/0002/0001]. The address information of a network where the server 4 is located may be an IP address. The server 4 may be a server of a publishing company that provides the cookbook 5 and may provide an additional service to a purchaser of the cookbook 5. Here, the network 3 includes both of wired/wireless networks and may be an Internet network in the case of the wired network. The network 3 may be connected to a server installed in a home as address information of a home network. Address information of the wireless network may be applied to a wireless Internet when the terminal is a terminal such as a cellular phone and the like.

The food ID may be represented as a name such as [a vegetable pan pizza] that directly represents a name of the food and combination of numbers such as [12345678] as an abbreviated number that allows the name to be easily recognized by the server and combination of other codes.

Referring to Fig. 1, again, information transmitted to the terminal 2 is read by the data read unit 22 and then is transmitted to the outside through the communication module 23. In detail, the information is controlled by the control unit 24 of the terminal 2 and is transmitted to the server 4 through the network 3.

The information transmitted to the server 4 is recognized as a specific food by various methods and then information related to the specific food is collected. The collected information is transmitted to the terminal 2 through the network 3, and the transmitted information is displayed on the display 25. Although not shown, the transmitted information may be output as sound information through a speaker.

When the food information is output on the display 25, a user may obtain additional information of the corresponding food with reference to the output information. For example, a user may obtain information of other food related to the corresponding
food, a recipe suitable for an oven of a specific type, and information of a moving picture about cooking food, or information of preferences of other people for the specific food.

As described above, a user can obtain food information in real-time, and thus can obtain the latest food information more exactly and can diversify the range of food information to easily obtain various food information. In addition, if sufficient information cannot be provided due to space limitation of books, more information can be provided by diversifying the range of use for a book.

Fig. 5 is a flow chart illustrating a food information provision method according to the first embodiment of the present disclosure.

Referring to Fig. 5, a user brings the terminal 2 close to a specific position of the cookbook 5 where the RF tag 1 is mounted in order to obtain additional information of a specific food. Then, the terminal 2 requests the RF tag 1 to transmit information recorded in the RF tag 1 (S1). Here, if the RF tag 1 manually operates, power may be applied thereto.

The RF tag 1 transmits the information recorded therein to the terminal 2 in response to the transmission request (S2). The RF tag 1 may transmit data only after authentication for the terminal 2.

After receiving data from the RF tag 1, the terminal 2 displays the information of the food (S3). Here, the displayed information may include a food ID such as [a vegetable pan pizza], layer information of the food, address information of a network where the server 4 is located, or the like. A user processes the displayed information (S5) and requests the server 4 for food information (S5). Here, the processing of the information (S5) may be agreed between the terminal 2 and the server 4 operated by a fabrication company for a cookbook. For example, it may be predetermined that layer information of food is filled in a specific transmission field and is transmitted to the server 4.

The server 4 requested for transmission of food information searches for information of the corresponding food therein or collects information from an external system (S6) to generate information to be directly transmitted (S7). Here, the generated information, as described above, may include information of other food related to the requested food, for example, a bulgogi pizza, if information of a vegetable pizza is transmitted, information of a recipe of a vegetable pizza using a specific oven, information of a moving picture about a detailed cooking process, preferences of other users about a vegetable pizza cooked by a recipe introduced in a cookbook, or the like.

The server 4, before providing food information to the terminal 2, requests the terminal 2 for authentication information for determining whether or not the terminal or the cookbook is authenticated (S8). The terminal 2 requested for the authentication
information transmits an authentication code (S9). The authentication code may be information that is received from the RF tag 1 to the terminal 2.

When the authentication code is received and it is confirmed that the terminal or the cookbook is authenticated, the generated food information is transmitted from the server 4 to the terminal 2 (S10).

The transmitted information is displayed on the terminal 2 or represented as sound, and a user can obtain additional information of the food therethrough.

The first embodiment may further include the following modified examples.

The food information display unit 51 may be configured as an image, however, should not be limited thereto and may be configured as letters. In the case of letters, a sentence such as "Place the terminal here" for designating a position to apply an RF reader may be further provided. However, an image of food may be provided to improve the recognizability of a user.

In the first embodiment, the cookbook 5 has a shape of commonly used book, that is, is configured as a plurality of sheets adhered together to hinge at one side using adhesives. However, the cookbook should not be limited thereto and may be formed by binding punched sheets with a ring.

In addition, the request of authentication from the server 4 to the terminal 2 (S8) and the transmission of the authentication code (S9) should be performed between the request of food information from the terminal 2 to the server 4 and the transmission of the food information from the server 4 to the terminal 2, however, the specific order does not matter.

Second embodiment

The first embodiment provides a recipe of a specific food introduced in a food-related book. However, if a user has a cooking appliance with a different operating condition from a recipe of a specific food introduced in a cookbook, the food cannot be made on the best condition. For example, if a user's cooking appliance can output power of up to 3000 W while a cookbook introduce cooking for 30 minutes using a cooking appliance with power of 4000 W, a user will be confused about a recipe.

A second embodiment can be applied to this case. The elements illustrated in the first embodiment is to the same in the second embodiment, and thus descriptions thereof will not be given and refer to descriptions illustrated in the first embodiment.

Fig. 6 is a structural view of a food information providing system according to a second embodiment of the present disclosure.

Referring to Fig. 6, the food information providing system includes a first RF tag 100, a second RF tag 300, a terminal 200, a server 600, and a network 500. Information related to a specific food is recorded in the first RF tag 100. Spec information of a cooking appliance 400, e.g., an oven, is recorded in the second RF tag
An RF reader system is mounted in the terminal 200 to read the food information and the spec information of the cooking appliance recorded in the first and second RF tags 100 and 300, respectively. The server 600 receives the food information from the terminal 200 to generate reply information. The network 500 connects the server 600 to the terminal 200.

Hereinafter, an operation the food information providing system will be described. The terminal 200 reads food information from the first RF tag 100 and reads the spec information of the cooking appliance from the second RF tag 300. The food information and the spec information are transmitted to the server 600 through the network 500. The server 600 searches for the best recipe for a user with reference to the spec information of the cooking appliance. Thereafter, the best recipe is transmitted to the terminal 200 and a user can operate the cooking appliance using the transmitted best recipe.

Hereinafter, each component of the food information providing system will be described in detail.

The first RF tag 100 is provided in a cookbook including a plurality of sheets. The configuration and operation of the cookbook are described in the first embodiment, and thus specific description thereof will not be given.

The first RF tag 100 includes an IC chip 110 where at least food information is recorded and an antenna 120 that radiates the information recorded in the IC chip 110 as a high frequency. Of course, power may be applied from the terminal 200 through the antenna 120.

In addition, the second RF tag 300 is provided in the cooking appliance 400. The cooking appliance 400 further includes a cooking appliance control unit 260, a manipulation unit 280, a display unit 270, a memory 290, and an operating unit 300 for operating the cooking appliance 400 itself. A user operates the cooking appliance using the manipulation unit 280 and the display unit 270 displays an operating condition of the cooking appliance 400. The memory 290 stores various information necessary for an operation of the cooking appliance 400 and the operating unit 300 includes various kinds of devices, e.g., a heater.

The terminal 200 includes an antenna 210 for communicating a high frequency between the first and second RF tags 100 and 300 and a data read unit 220 for processing information received through the antenna 210. Since the antenna 210 and the data read unit 220 serve as an RF reader, they, as a whole, may be referred to as an RF reader module. The terminal 200 further includes a control unit 410 that entirely controls a system of the terminal 200, a display 420 that displays the condition and other information of the terminal 200, and a communication module 230 that allows the terminal 200 to communicate with other external system.
The communication module 230 is connected to the server 400 through the network 300 to exchange data with the server 400.

Hereinafter, an operation of the food information providing system will be described.

At least information related to food is included in the IC chip 110 of the first RF tag 100, and the information is transmitted to the terminal 200 through the antenna 120. The information recorded in the IC chip 110 is described in the first embodiment, and thus specific description thereof will not be given. Here, since the first RF tag 100 is aligned with the food information display unit of a cookbook, a user can easily read the desired food information.

The information included in the second RF tag 300 is illustrated in Fig. 7.

Referring to Fig. 7, a start code field, an end code field, an authentication code field, and an error code field are included in the second RF tag 300. Each field includes a code fundamentally necessary for an operation of an RF tag reading system and may be changed depending on specific conditions.

Besides the above-mentioned information, the second RF tag 300 includes specific information of a cooking appliance and a network address information. The specific information may include information that is recognizable by only a production company of the cooking appliance, for example, [oven0203], as an ID for allowing the production company to recognize a specific cooking appliance. The specific information may further include installation information of a heater mounted in the cooking appliance, power information of the heater, an inner capacity of a cavity, or the like.

The specific information may include information for recognizing a cooking appliance of a user. The network address information may include address information of a network where the server 600 is located.

Referring to Fig. 6, again, information transmitted from the first and second RF tags 100 and 300 to the terminal 200 is read by the data read unit 220 and then is transmitted to the outside by the communication module 230. In detail, the information is controlled by the control unit 240 of the terminal 200 and is transmitted to the server 600 through the network 500.

The information transmitted to the server 600 is recognized as a specific food by various methods and then information related to the specific food is collected. The collected information is transmitted to the terminal 200 through the network 500, and the transmitted information is displayed on the display 420. Although not shown, the transmitted information may be output as sound information through a speaker.

When the food information is output on the display 420, a user may obtain additional information of the corresponding food with reference to the output information. For example, a user may obtain information of other food related to the cor-
responding food, a recipe suitable for an oven of a specific type, and information of a
moving picture of cooking food, or information of preferences of other people about
the specific food.

As described above, a user can obtain food information in real-time, and thus can
obtain the latest food information more exactly and can diversify the range of food in-
formation to easily obtain various food information. In addition, when sufficient in-
formation cannot be provided due to space limitation of books, more information can
be provided by diversifying the range of use for a book and the best recipe can be
provided for the cooking appliance used for cooking a food selected by a user.

Fig. 8 is a flow chart illustrating a food information provision method according to
the second embodiment of the present disclosure.

Referring to Fig. 8, a user brings a terminal 200 close to a specific position of a
cookbook where a first RF tag 100 is mounted in order to obtain additional information
of food. Then, the terminal 200 requests the first RF tag 100 to transmit information
recorded in the first RF tag 100 (S11). Here, if the first RF tag 100 operates manually,
power may be applied thereto.

The first RF tag 100 transmits the information recorded therein to the terminal 200
in response to the transmission request (S12). The first RF tag 100 may transmit in-
formation of only after authentication for the terminal 200.

The terminal 200 is brought close to a portion of the specific cooking appliance
where the second RF tag 300 is mounted in order to obtain spec information of the
cooking appliance. Then, the terminal 200 requests the second RF tag 300 for
transmission of information recorded therein (S13). Here, if the second RF tag 300
operates manually, power may be applied thereto. The second RF tag 300 transmits the
information to the terminal 200 in response to the request of transmission (S14). Here,
the authentication may be performed, too.

The terminal 200 displays the data received from the first and second RF tags 100
and 300 (S15). Here, the displayed information may be the information transmitted
from the first RF tag 100 and may include a food ID, e.g., [a vegetable pan pizza],
layer information of the food, or layer information of the food, address information of
a network where the server 600 is located, or the like. Of course, spec information of a
cooking appliance and address information of a network where the server 600 is
located, which are provided from the second RF tag 300, may be displayed, too.

When the information is displayed, a user may select network address information
transmitted from the second RF tag 300 mounted in the cooking appliance or network
address information transmitted from the first RF tag 100. Here, although a user uses
either of a server of a publishing company for a cookbook or a server of a fabrication
company for a cooking appliance, a user can sufficient information, and thus a user can
simultaneously various information from the servers of the two companies. Besides, various selections may be made according to predetermined methods between the server 600 and the terminal 200.

A user processes the displayed information (S16) to request the server 600 for food information (S17).

The server 600 requested for transmission of food information searches for information of the corresponding food therein or collects data from an external system, for example, a server of a production company of a cooking appliance in the case of a server of a publishing company, and a server of a publishing company in the case of a server of a production company of a cooking appliance, (S18) to generate information to be directly transmitted (S19). Here, the generated information, as described above, may include information of other food related to the requested food, for example, a bulgogi pizza, if information of a vegetable pizza is transmitted, information of the best recipe of making a vegetable pizza using a cooking appliance of a user, information of a moving picture of a detailed cooking process, preferences of other users about a vegetable pizza cooked by a recipe introduced in a cookbook, or the like.

The server 600, before providing food information to the terminal 200, requests the terminal 200 for authentication information for determining whether or not the terminal or the cookbook is authenticated (S20). The terminal 200 requested for the authentication information transmits an authentication code (S21). The authentication code may include information received from the first RF tag 100 or the second RF tag 300.

When the authentication code is received and it is confirmed that the terminal or the cookbook is authenticated, the generated food information is transmitted from the server 600 to the terminal 200 (S22).

The transmitted information is displayed on the terminal 200 or represented as sound, and a user can obtain additional information of the food therethrough. Here, manipulating information of a cooking appliance is obtained, and a user can operate the cooking appliance on the best condition for cooking the food.

The second embodiment may further include the following modified examples.

The request of authentication from the server 600 to the terminal 200 (S20) and the transmission of the authentication code (S21) should be performed between the request of food information from the terminal 200 to the server 600 (S17) and the transmission of the food information from the server 600 to the terminal 200 (S22), however, the specific order does not matter.

In addition, network address information is included in both of the first and second RF tags 100 and 300, however, the second embodiment should not be limited thereto, and the network address information of a server may not be provided in any one of the
first and second RF tags 100 and 300.

Industrial Applicability

According to the present disclosure, a user can obtain the latest information of food in real-time and can cook more conveniently by diversification of the range of food information provided to a user. Also, when sufficient information cannot be provided due to space limitation of books, the range of use for a book can be diversified to provide more information, thereby improving satisfaction of a purchaser of the book. In addition, a user that does not know how to use a cooking appliance for cooking a specific food can easily operate the cooking appliance.
Claims

[1] A food information providing system comprising:
   at least one radio frequency tag where at least network address information is
   recorded;
   a terminal where a radio frequency reader module for reading information
   recorded in the radio frequency tag is mounted; and
   a server connected to the terminal to provide food information to the terminal.

[2] The food information providing system according to claim 1, wherein the radio
   frequency tag is attached to a book.

[3] The food information providing system according to claim 2, wherein an
   attachment portion of the radio frequency tag is aligned with a surface where an
   image of food or information of food is recorded in the book.

[4] The food information providing system according to claim 1, wherein the in-
   formation of the radio frequency tag comprises a food identification or layer in-
   formation according to the kinds of food.

[5] The food information providing system according to claim 1, wherein the food
   information comprises a moving picture of cooking a specific food, a recipe for
   the specific food, and preference for the specific food.

[6] The food information providing system according to claim 1, wherein the at least
   one radio frequency tag comprises:
   a first radio frequency tag where at least information of food is recorded; and
   a second radio frequency tag where at least spec information of a cooking
   appliance is recorded, wherein
   the food information comprises at least operating information of the cooking
   appliance.

[7] A cookbook comprising:
   a sheet;
   a food information display unit disposed on one surface of the sheet;
   a radio frequency tag inserted into the sheet; and
   a conductor disposed on one surface of the radio frequency tag such that in-
   formation of the radio frequency tag is not radiated.

[8] A food information provision method comprising:
   reading information recorded in a radio frequency tag mounted in a sheet using a
   terminal, the radio frequency tag being aligned with food information printed on
   one surface of the sheet;
   connecting a server to a network using the information of the radio frequency
   tag; and
downloading food information corresponding to the information of the radio frequency tag from the server connected to the network.

[9] The food information provision method according to claim 8, wherein the information of the radio frequency tag comprises one or more selected from network address information, a food identification, and layer information according to the kinds of food.

[10] The food information provision method according to claim 8, wherein the food information comprises at least one of a moving picture of cooking food, a recipe for food, and preference for food.

[11] The food information provision method according to claim 8, further comprising, before the reading of information recorded in the radio frequency tag or before the connecting of the server to the network, receiving spec information of the cooking appliance from other radio frequency tag provided in a cooking appliance, wherein the food information further comprises operating information of the cooking appliance.

[12] A food information providing system comprising:

a radio frequency tag where at least network address information and information of a specific food are recorded;

a terminal where a radio frequency reader module for reading information recorded in the radio frequency tag is mounted; and

a server connected to the terminal to provide food information to the terminal.

[13] The food information providing system according to claim 12, wherein the radio frequency tag is attached to a book.

[14] The food information providing system according to claim 12, wherein an attachment portion of the radio frequency tag is aligned with a surface where an image of food or information of food is recorded in the book.

[15] The food information providing system according to claim 12, wherein the information of the radio frequency tag comprises a food identification or layer information according to the kinds of food.

[16] The food information providing system according to claim 12, wherein the food information comprises a moving picture of cooking a specific food, a recipe for the specific food, and preference for the specific food.

[17] A food information providing system comprising:

a first radio frequency tag where at least information of food is recorded;

a second radio frequency tag where at least spec information of a cooking appliance is recorded;

a terminal where a radio frequency reader is mounted such that at least spec
formation of the cooking appliance and the food information are input from the first radio frequency tag and the second radio frequency tag; and a server transmitting operating information of the cooking appliance to the terminal with reference to the food information and the spec information of the cooking appliance transmitted from the terminal.

[18] The food information providing system according to claim 17, wherein the first radio frequency tag is provided in a book and the second radio frequency tag is provided in the cooking appliance.

[19] The food information providing system according to claim 17, wherein the terminal is connected to the server through a network and the information input from the first radio frequency tag and/or the second radio frequency tag comprises network address information of the server.
[Fig. 6]

[Fig. 7]

<table>
<thead>
<tr>
<th>ADDRESS</th>
<th>FIELD NAME</th>
</tr>
</thead>
<tbody>
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<td>START CODE</td>
</tr>
<tr>
<td>1</td>
<td>AUTHENTICATION CODE</td>
</tr>
<tr>
<td>2</td>
<td>NETWORK ADDRESS INFORMATION</td>
</tr>
<tr>
<td>3</td>
<td>SPEC INFORMATION OF COOKING APPLIANCE</td>
</tr>
<tr>
<td>4</td>
<td>ERROR CODE</td>
</tr>
<tr>
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INTERNATIONAL SEARCH REPORT

PCT/KR2007/005751

A. CLASSIFICATION OF SUBJECT MATTER

G06F 19/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC8 G06F 19/000, G06F 7/000, F25B 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975
Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS(KIPO internal) "RF tag, reader, server, food, information"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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<td>US 2002/0059175 A1 (NAKANO, S) 16 May 2002 See abstract, claim 1</td>
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<td>US 2002/0157411 A1 (ISHIKAWA, T et al) 31 October 2002 See abstract, figs 4 and 10, claim 17</td>
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<td>Y</td>
<td>KR 10-2005-028097 A (HONG, J C et al) 22 March 2005 See abstract, fig 1, claim 1</td>
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Further documents are listed in the continuation of Box C

See patent family annex

* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
20 FEBRUARY 2008 (20 02 2008)

Date of mailing of the international search report
21 FEBRUARY 2008 (21.02.2008)

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seomsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Authorized officer
MAENG, Sung Jae

Facsimile No 82-42-472-7140

Telephone No 82-42-481-5727

Form PCT/ISA/210 (second sheet) (April 2007)
**INTERNATIONAL SEARCH REPORT**

**Box No. II**  Observations  **where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [ ] Claims Nos because they relate to subject matter not required to be searched by this Authority, namely

2. [ ] Claims Nos because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically

3. [ ] Claims Nos because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 64(a)

**Box No. III**  Observations  **where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1-6 and 8-19 directed to a food information providing system and method

2. Claim 7 directed to a cookbook

1. [ ] As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos

4. [ ] No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims, it is covered by claims Nos

**Remark on Protest**  

[ ] The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee  

[ ] The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation  

[ ] No protest accompanied the payment of additional search fees

Form PCT/ISA/210 (continuation of first sheet (2)) (April 2007)
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