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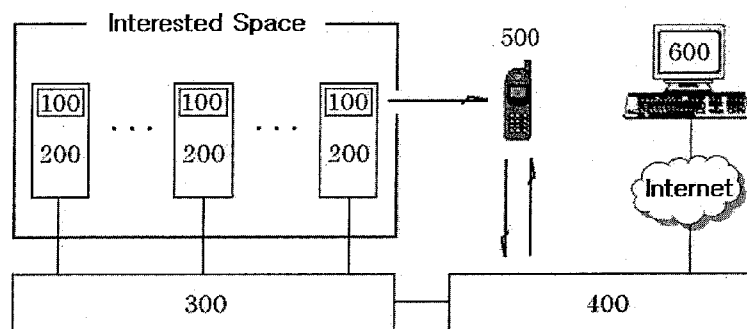
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(54) Title: LOCATION-SPECIFIC INFORMATION MANAGEMENT SYSTEM

[Figure 1]



(57) Abstract: The present invention relates to a system that grasps the position of a person and transmits only positionally meaningful information to the person in that place when a user of a mobile terminal first makes the request of providing information. According to the present invention, a piece of information an informant intends to provide exists in a place people interested in the corresponding information are located and the information is provided only when there is an active request from the people interested in the corresponding information so that the recognition rate of information increases considerably and as a result, advertisement effects, etc. from the corresponding information is also greatly improved.

【DESCRIPTION】**【Invention Title】**

LOCATION-SPECIFIC INFORMATION MANAGEMENT SYSTEM

【Technical Field】

The present invention relates to a system that grasps the position of a person and only transmits positionally meaningful information to the person at that place when a user of a mobile terminal makes request for providing information.

【Background Art】

Generally, the delivery of information through a mobile terminal such as a portable telephone is performed randomly independent of the location of a recipient, so that information that a recipient comes across through the mobile terminal tends to be of no relation to the position of the recipient. As a result, such information becomes unmeaningful or improper to the recipient at any place. Also, a piece of unwanted information is commonly considered as spam, thereby being of no value as information and becoming useless.

【Disclosure】**【Technical Problem】**

The present invention has been made to solve at least the above-mentioned problems occurring in the prior art, and an object of the present invention is to provide a means that grasps the position of a person and only transmits positionally meaningful information to the person at that place when a user of a mobile terminal first requests of providing information.

【Technical Solution】

To achieve the above object, the present invention provides a location-specific information management system including: a tag 100 attached to an information request booth 200 and assigned separately a corresponding ID (hereinafter, referred to as 'Booth ID') for a location that the information request booth 200 is disposed; an information request booth 200 a multiple of which are disposed at major positions within an interested space in a tag 100

attached state, confirming the position of a mobile terminal 500 user and mediating an information request of the user; a location management server 300 storing the booth ID of the tag 100 and the location information regarding the position the information request booth 200 is disposed in one unity and transmitting the location information of the information request booth 200 to a location-specific information management server 400 if the booth ID of the tag 100 is received from the location-specific information management server 400; the location-specific information management server 400 storing information separately provided regarding the location of the information request booth 200 (hereinafter, referred to as 'location-specific information') by dividing it per the location of the information request booth 200, transmitting the booth ID of the tag 100 to the location management server 300 when it is received from the mobile terminal 500, and transmitting location-specific information corresponding to the position of the information request booth 200 to the mobile terminal 500 after the position information of the information request booth 200 is received from the location management server 300; a mobile terminal 500 reading the booth ID of the tag 100 and transmitting it to the location-specific information management server 400, and receiving location-specific information corresponding to the position of the information request booth 200 from the location-specific information management server 400; and an information provider computer 600 connected over the internet to the location-specific information management server 400 and allowing a person who intends to provide location-specific information (hereinafter, referred to as 'information provider') to access the location-specific information management server 400 to post location-specific information on the location-specific information management server 400.

【Advantageous Effects】

According to the present invention, a piece of information an information provider intends to provide exists in a place where people interested in the corresponding information are located, and that information is provided as long as there has been an active request of people interested in the corresponding information, so that the recognition rate of information increases considerably and as a result, effects from the corresponding information such as advertisements, etc. also get greatly improved.

【Description of Drawings】

FIG. 1 is a diagram indicating the construction of a location-specific information management system according to the present invention.

【Best Mode】

Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings.

The tag 100 is fixed to the information request booth 200 one-to-one, and the tag 100 is separately assigned a booth ID corresponding to each position of the information request booth 200. The tag 100 can be of a RFID form or a bar code form.

In the information request booth 200, a multiple of information request booths 200 are disposed at major positions within an interested space in a tag 100 attached state. Herein, the interested space means an objective place where an information provider provides information (location-specific information) directly related to a position that a user of the mobile terminal 500 exists in by the mediation of the information request booth 200.

For example, a businessman that owns retail branches of A cosmetics in several regions can place information carrying separate advertisement contents regarding a respective branch on an advertisement plate, etc. of a subway station exit placed near to a place in which each branch is located. In this case, the subway station corresponds to the interested space. And, the advertisement plate existing in the subway station exit corresponds to the information request booth 200, the separate advertisement contents

regarding a respective branch correspond to location-specific information.

The information request booth 200 serves to confirm the position of the mobile terminal 500 user and mediate the information request of the user (this will be described later), wherein the information request booth 200 is comprised of a booth performing an information request solely, or the information request booth 200 can be constructed to perform such an information request by employing existing advertisements, etc. That is, the information request booth 200 may be constructed by installing separate facilities and attaching the tag 100 onto them so that the mobile terminal 500 user can read the tag 100. In another way, it may be constructed by attaching one tag 100 onto an existing advertisement, etc. so that the mobile terminal 500 user can read the tag 100.

In the aforementioned example, the current position of the mobile terminal 500 user (equivalent to the current position of the advertisement plate (information request booth 200)) may be confirmed by the mobile terminal 500 user reading and transmitting the tag 100 attached to the advertisement plate.

The location management server 300 stores the booth ID of the tag 100 and location information regarding a place the information request booth 200 is disposed in one unity.

As shown in the above example, if a place an information request booth 200 to which the tag 100 having booth ID '1' is attached is disposed corresponds to 'exit 1 of Gangnam station of subway line number 2', a place an information request booth 200 to which the tag 100 having booth ID '2' is attached is disposed corresponds to 'exit 3 of Apgujung station of subway line number 3', a place an information request booth 200 to which the tag 100 having booth ID '3' is attached is disposed corresponds to 'exit 5 of Seoul station of subway line number 1', etc., the location management server 300 may store information of a unified format so that the booth ID of the tag 100 and the position of the information request booth 200 are combined in one unity such as ' Booth ID 1 : exit 1 of Gangnam station of subway line number

2', 'Booth ID 2 : exit 3 of Apgujung station of subway line number 3', 'Booth ID 3 : exit 5 of Seoul station of subway line number 1', etc.

As a result, only when the location management server 300 recognizes the booth ID of the tag 100, it can directly grasp the place of the information request booth 200 to which the corresponding tag 100 is attached. When such a location management server 300 receives the booth ID of a specific tag 100 from the location-specific information management server 400, it transmits the position information of the information request booth 200 to which a corresponding tag 100 is attached to the location-specific information management server 400.

The location-specific information management server 400 stores location-specific information it intends to provide separately according to the position of the information request booth 200 by dividing such information per each position at which the information request booth 200 is disposed.

That is, as shown in the above example, the location-specific information management server 400 may store information of a unified format so that the position of the information request booth 200 and the corresponding location-specific information are combined in one unity such as 'exit 1 of Gangnam station of subway line number 2 : A cosmetics store behind Kookmin bank 100 meters ahead, all products 30% discount event till August 25, 'exit 3 of Apgujung station of subway line number 3 : A cosmetics store 150 meters straight ahead, turn right and 30 more meters, free make-up training course operation till July 30', 'exit 5 of Seoul station of subway line number 1 : A cosmetics store 30 meters ahead thereof, free presentation of a travel cosmetic with every purchase over 20000 won, etc.

When the location-specific information management server 400 receives the booth ID of a specific tag 100 from the mobile terminal 500, it serves to transmit it to the location management server 300. Also, after the location-specific information management server 400 receives (confirms) the position information of the information request booth 200 from the location management

server 300, it serves to transmit location-specific information corresponding to the position of the equivalent information request booth 200 to the mobile terminal 500.

That is, as shown in the above example, the location-specific information management server 400 receives booth ID '1' from the mobile terminal 500 and transmits it to the location management server 300, and then after it receives information that the position of the information request booth 200 is 'exit 1 of Gangnam station of subway line number 2' from the location management server 300, it transmits location-specific information telling 'A cosmetics store behind Kookmin bank 100 meters ahead, all products 30% discount event till August 25' to the mobile terminal 500, or the location-specific information management server 400 receives booth ID '2' from the mobile terminal 500 and transmits it to the location management server 300, and then after it receives information that the position of the information request booth 200 is 'exit 3 of Apgujung station of subway line number 3' from the location management server 300, it transmits location-specific information telling 'A cosmetics store 150 meters straight ahead, turn right and 30 more meters, free make-up training course operation till July 30' to the mobile terminal 500, or the location-specific information management server 400 receives booth ID '3' from the mobile terminal 500 and transmits it to the location management server 300, and then after it receives information that the position of the information request booth 200 is 'exit 5 of Seoul station of subway line number 1' from the location management server 300, it transmits location-specific information telling 'A cosmetics store 30 meters ahead, free presentation of a travel cosmetic set with every purchase over 20000 won' to the mobile terminal 500, etc.

On the one hand, it is preferred that the location-specific information management server 400 may allow an information provider to access the information provider computer 600 and set his account on the location-specific information management server 400 for him to post location-specific information so that various information providers can post each location-

specific information under their own accounts.

Also, it is preferred that the location-specific information management server 400 may provide a list of useful information request booths 200 existing in a place an information provider seems to be interested in for the information provider computer 600, so that the information provider can select a specific information request booth 200. For example, when an information provider inputs a keyword of 'Gangnam station' as a place he/she intends to provide his own location-specific information about, the location-specific information management server 400 may provide a list of information request booths 200 disposed at Gangnam station and near Gangnam station together with the corresponding location information to the information provider computer 600, so that therefrom the information provider can select a wanted information request booth 200.

On the one hand, the informant can place location-specific information in various forms such as text, music, moving images, etc. on the location-specific information management server 400. It is preferred that location-specific information with various contents such as commercial or public advertisement phrases, moving images, a promotion (online coupon, etc.), news, geographical information, etc. can be posted.

The mobile terminal 500 serves to read the booth ID of the tag 100 and transmit it to the location-specific information management server 400, and it serves to receive location-specific information corresponding to the position of the information request booth 200 from the location-specific information management server 400.

That is, as shown in the above example, when a user of the mobile terminal 500 reads the booth ID of the tag 100 and transmits it to the location-specific information management server 400, the location-specific information management server 400 transmits it to the location management server 300 again and confirms the position of the information request booth 200, and then transmits location-specific information corresponding to that position to the mobile terminal 500.

As shown in the above example, if the booth ID the user of the mobile terminal 500 reads and transmits is '1', the mobile terminal 500 user may receive location-specific information telling 'A cosmetics store behind Kookmin bank 100 meters ahead, all products 30% discount event till August 25'. If the booth ID the user of the mobile terminal 500 reads and transmits is '2', the mobile terminal 500 user may receive location-specific information telling 'A cosmetics store 150 meters straight ahead, turn right and 30 more meters, free make-up training course operation till July 30'. And, if the booth ID the user of the mobile terminal 500 reads and transmits is '3', the mobile terminal 500 user may receive location-specific information telling 'A cosmetics store 30 meters ahead, free presentation of a travel cosmetic set with every 20000 won purchase'.

In the present invention, there is no special limit in a mode of the mobile terminal 500 transmitting the booth ID of the tag 100 to the location-specific information management server 400. Thus, the mobile terminal 500 can transmit the booth ID of the tag 100 to the location-specific information management server 400. For example, the mobile terminal 500 may read the booth ID of the tag 100 and transmit it to the location-specific information management server 400 by using a RFID reader or a bar code reader mounted on the body, or the mobile terminal may transmit the booth ID of the tag 100 to the location-specific information management server 400 by a number input method using a keypad, or the mobile terminal 500 may transmit the booth ID of the tag 100 indicated on a photograph, etc. to the location-specific information management server 400 by taking a photograph of the tag 100 using a camera mounted on the body.

The mobile terminal 500 is a common terminal, and in general refers to a cellular phone but is not limited therein. Accordingly, the mobile terminal includes various types of terminals such as a laptop, a PDA (Personal Digital Assistant), a PCS (Personal Communication System), a hand-held PC, etc.

The information provider computer 600 is connected to the location-specific information management server 400 over the internet, and the

information provider computer 600 allows an information provider to access the location-specific information management server 400 and place a piece of wanted location-specific information thereon.

The information provider computer 600 generally refers to a personal computer (PC), but it can be any communication means capable of transmitting/receiving data. For example, the information provider computer 600 includes various types of computers such as a laptop, a PDA (Personal Digital Assistant), a cellular phone, a PCS (Personal Communication System), a hand-held PC, etc.

【Mode for Invention】

<SUMMARY AND EMBODIMENT OF A SYSTEM ACCORDING TO THE PRESENT INVENTION>

1. The summary of the system

The supplier of a system according to the present invention installs an information request booth 200 to which a RFID having a unique ID (booth ID) (a mode of assigning the information request booth 200 an ID can include various methods as described above, but hereinafter, we suppose that the RFID is used for conveniences' sake) is attached, at a geographical location determined that there must be lots of information requests, and records the position of a location management server 300 and the booth ID that match each other.

First, an information provider logs into a location-specific information management server 400 and makes his account using the internet, etc. The location-specific information management server 400 provides the information provider with a list of useful information request booths 200 in the region the information provider seems to be interested in. The information provider selects an interesting information request booth 200 and posts a piece of information he intends to provide. At this time, the informant can post different information for each information request booth 200.

When a user of the mobile terminal 500 discovers the information request booth 200 and reads the ID of the information request booth 200 using

a RFID reader, the mobile terminal 500 transmits it to the location-specific information management server 400 through a network of a wireless service provider. The location-specific information management server 400 transmits location-specific information corresponding to the equivalent information request booth 200 to the mobile terminal 500. At this time, a type of transmitted information may be location-specific information itself, or it may be the list and summary of location-specific information posted on the location-specific information management server 400, or it may be a piece of categorized location-specific information.

Meanwhile, in the case of using the system according to the present invention for the purpose of a commercial promotion, it is possible to directly measure advertisement effects for each information request booth 200.

2. Embodiment

Printed advertisements installed inside a subway station can be employed as the information request booth 200. Person 'A' who intends to place a printed advertisement inside a subway station may contact a supplier of the system according to the present invention directly or through an advertising agency and agree to employ the printed advertisement as the information request booth 200. On the printed advertisement, a fact that the printed advertisement is an information request booth 200 can be indicated.

The person 'A' may occasionally log in his account set at the website of the supplier of the system according to the present invention and grasp the installed position of his printed advertisement, and may post advertisement moving images or promotions fit for the contents and position of each advertisement.

A pedestrian 'B' feels interested in the printed advertisement of person 'A' and reads a RFID attached to the information request booth 200 using a RFID reader of a cellular phone (a mobile terminal 500) in order to check if there is additional information or a promotion. The cellular phone terminal transmits the ID (booth ID) of the corresponding information request

booth 200 to the location-specific information management server 400, and the location-specific information management server 400 transmits a piece of information person 'A' has posted for the corresponding information request booth 200 to B's terminal. An example of the transmitted information may be a location guidance of a person A's store nearest to the subway station where there is the corresponding information request booth 200, and a 10% discount coupon for a person A's being promoted product.

B drops by A's store and uses the coupon, and the result is known to the location-specific information management server 400. The location-specific information management server 400 may analyze useful information such as times of information requests and the purchase-linked rate occurring at each information request booth 200 and make this data known to person 'B' when B requests.

【Industrial Applicability】

The present invention can considerably increase the recognition rate of a piece of information that an information provider intends to provide, and resultantly, it can greatly improve advertisement effects, etc. by means of such information. Thus, technologies according to the present invention can be widely applied in the telecommunication and advertisement fields so as to realize its practical and commercial values.

【CLAIMS】**【Claim 1】**

A location-specific information management system comprising:

a tag 100 attached to an information request booth 200 and assigned separately a corresponding ID (hereinafter, referred to as 'Booth ID') for a location that the information request booth 200 is disposed;

an information request booth 200 a multiple of which are disposed at major positions within an interested space in a tag 100 attached state, confirming the position of a mobile terminal 500 user and mediating a information request of the user;

a location management server 300 storing the booth ID of the tag 100 and the location information regarding the position of the information request booth 200 in one unity and transmitting the location information of the information request booth 200 to a location-specific information management server 400 if the booth ID of the tag 100 is received from the location-specific information management server 400;

the location-specific information management server 400 storing information separately provided regarding the location the information request booth 200 is disposed (hereinafter, referred to as 'location-specific information') by dividing it per the location of the information request booth 200, transmitting the booth ID of the tag 100 to the location management server 300 when it is received from the mobile terminal 500, and transmitting location-specific information corresponding to the position of the information request booth 200 to the mobile terminal 500 after the position information of the information request booth 200 is received from the location management server 300;

a mobile terminal 500 reading the booth ID of the tag 100 and transmitting it to the location-specific information management server 400, and receiving location-specific information corresponding to the position of the information request booth 200 from the location-specific information management server 400; and

an information provider computer 600 connected over the internet to the location-specific information management server 400 and allowing a person who intends to provide location-specific information (hereinafter, referred to as 'information provider') to access the location-specific information management server 400 to post location-specific information on the location-specific information management server 400.

【Claim 2】

The system of claim 1, wherein the tag 100 is a RFID or a bar code.

【Claim 3】

The system of claim 1, wherein the information request booth 200 is constructed as a booth performing an information request solely, or is constructed to perform an information request by employing an existing advertisement and so on.

【Claim 4】

The system of claim 1, wherein the location-specific information management server 400 allows the information provider to set his account to post location-specific information.

【Claim 5】

The system of claim 1, wherein the location-specific information management server 400 provides a list of useful information request booths 200 existing in a position the information provider is interested in for the information provider computer 600 so that the information provider can select a specific information request booth 200.

【Claim 6】

The system of claim 1, wherein the location-specific information management server 400 allows the information provider to post various forms of location-specific information such as text, music, moving images, etc.

【Claim 7】

The system of claim 1, wherein the location-specific information management server 400 allows the information provider to post location-specific information of various contents such as commercial or public

advertisement phrases, promotions (online coupon, etc.), news, geographical information and so on.

【Claim 8】

The system of claim 1, wherein the mobile terminal 500 reads the booth ID of the tag 100 and transmits it to the location-specific information management server 400 using a RFID reader or a bar code reader mounted on the body.

【Claim 9】

The system of claim 1, wherein the mobile terminal 500 transmits the booth ID of the tag 100 to the location-specific information management server 400 by a method of inputting numbers using a keypad.

【Claim 10】

The system of claim 1, wherein the mobile terminal 500 transmits the booth ID of the tag 100 to the location-specific information management server 400 by photographing the tag 100 using a camera mounted on the body.

【Claim 11】

The system of claim 1, wherein the mobile terminal 500 receives location-specific information comprised of one or more of location-specific information itself, the list and summary of location-specific information posted on the location-specific information management server 400, and a categorized location-specific information from the location-specific information management server 400.

【Claim 12】

The system of claim 1, wherein the mobile terminal 500 has one or more of a cellular phone, a laptop, a PDA (Personal Digital Assistant), a cellular phone, a PCS (Personal Communication System), and a hand-held PC.

【Claim 13】

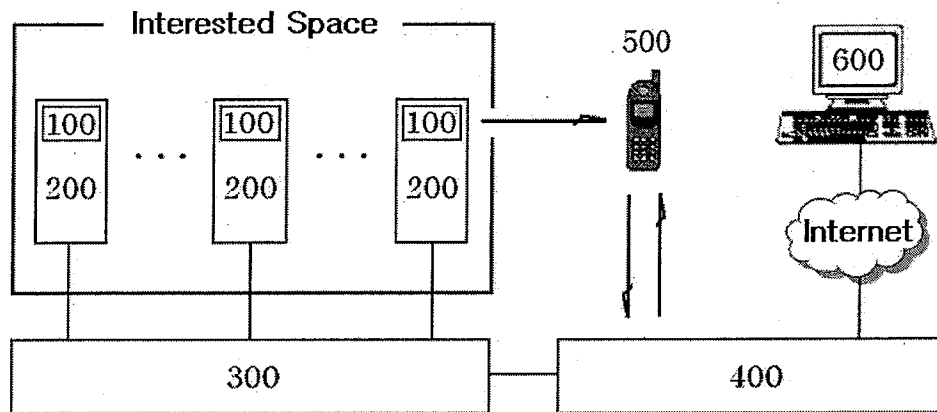
The system of claim 1, wherein the information provider computer 600 has one or more of a personal computer (PC), a laptop, a PDA (Personal Digital Assistant), a cellular phone, a PCS (Personal Communication System), and a hand-held PC.

【Claim 14】

The system of claim 1, wherein the location-specific information management server 400 informs the information provider computer 600 of useful information such as times of information requests and the product purchase-linked rate occurring at each information request booth 200 when the information provider requests.

【DRAWINGS】

【Figure 1】



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/005860**A. CLASSIFICATION OF SUBJECT MATTER****H04B 7/26(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)

IPC : H04B, H04L, H04Q, H04W

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), IEEE xplore, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2006-0067413 A (KTFREETEL CO., LTD.) 20 June 2006 See the abstract, figures 3-4, page 3, line 28- page 4, line 34, and claims 1, 9.	1 - 14
Y	KR 10-2006-0097187 A (SK TELECOM CO., LTD.) 14 September 2006 See the abstract, figures 1-2, page 3, line 62- page 6, line 7, and claims 5-10.	1 - 14
A	US 2002/0169666 A1 (MASAYUKI IKE et al.) 14 November 2002 See the abstract, figures 1, 7, paragraphs [0018]-[0031], [0037]-[0050], and claims 1-5.	1 - 14



Further documents are listed in the continuation of Box C.



See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

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"&" document member of the same patent family

Date of the actual completion of the international search

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Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

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Jung, Gu Ung

Telephone No. 82-42-481-8598



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/005860

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2006-0067413 A	20.06.2006	None	
KR 10-2006-0097187 A	14.09.2006	None	
US 2002/0169666 A1	14.11.2002	JP 2002-334270 A	22.11.2002