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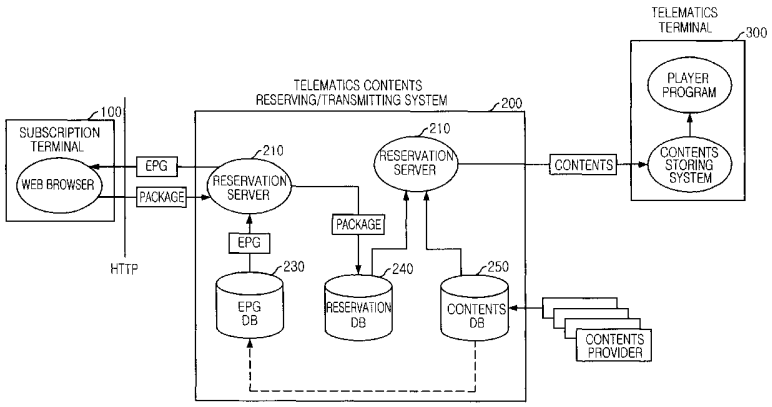
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(54) **Title:** SYSTEM AND METHOD FOR RESERVING AND TRANSMITTING TELEMATICS CONTENTS



(57) **Abstract:** Provided are a system and method for reserving and transmitting telematics contents. The system and method are provided to store reservation information transmitted from a user and transmit reservation contents to a telematics terminal at reservation time so that the telematics terminal receives/stores the contents in advance in an idle condition and conveniently uses the contents without transmission delay. The system includes: a telematics contents reserving and transmitting system, including: a contents storing block for storing and managing contents provided from a contents provider (CP); a contents list storing block for storing and managing a list for contents stored in the contents storing block; a reserving block for reading the contents list from the contents storing block based on the contents transmitting/reserving request signal from the outside, transmitting the contents list to a requesting part, receiving a reservation of specific contents to be transmitted to a telematics terminal and storing the reservation information; a reservation information storing block for storing reservation information by control of the reserving block; and a transmitting block for reading the contents from the contents storing block based on the reservation information stored in the reservation information storing block and transmitting the contents to the telematics terminal.

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SYSTEM AND METHOD FOR RESERVING AND TRANSMITTING TELEMATICS CONTENTS

Description

Technical Field

The present invention relates to a system and method for reserving and transmitting telematics contents; and, more particularly, to a telematics contents reserving and transmitting system for storing reservation information transmitted from a user and transmitting reservation contents to a telematics terminal at reservation time so that the telematics terminal previously receives/stores the telematics contents in an idle condition in advance and conveniently uses the contents without transmission delay, and a method thereof.

Background Art

Recently, a telematics technology for providing diverse services such as an automatic accident report service, an emergency call service and map service through a terminal set up in a vehicle by integrating a mobile communication technology, a satellite radiodetermination technology, a map information technology and a vehicle device control technology has been actively developed. In the future, the telematics technology is expected to provide more convenient and safe drive environments than now and an environment in which all information services used in an office and home can be used in the inside of a vehicle without disconnection.

Generally, in the telematics service provided to the terminal in the inside of the vehicle, an operation for browsing contents starts when the vehicle starts to move. Therefore, when high-volume multimedia contents are transmitted through a wireless communication network, it

takes much time to receive the contents. Also, when a transmission failure is generated due to characteristics of the wireless communication network, there is a difficulty for the terminal to perform operation properly.

Disclosure

Technical Problem

It is, therefore, an object of the present invention to provide a telematics contents reserving and transmitting system for storing reservation information transmitted from a user and transmitting reservation contents to a telematics terminal at reservation time so as that the telematics terminal previously receives/stores the contents in an idle condition in advance and conveniently uses the contents without transmission delay, and a method thereof.

Other objects and advantages of the invention will be understood by the following description and become more apparent from the embodiments in accordance with the present invention, which is set forth hereinafter. It will be also apparent that objects and aspects of the invention can be embodied easily by the means defined in the claims. and combinations thereof.

Technical Solution

In accordance with one aspect of the present invention, there is provided a telematics contents reserving and transmitting system, including: a contents storing block for storing and managing contents provided from a contents provider (CP); a contents list storing block for storing and managing a list of contents stored in the contents storing block; a reserving block for reading the contents list from the contents storing block based on a contents transmitting/reserving request signal from outside,

transmitting the contents list to a requesting part, receiving a reservation of specific contents to be transmitted to a telematics terminal and storing the reservation information; a reservation information storing block for storing reservation information under control of the reserving block; and a transmitting block for reading the contents from the contents storing block based on the reservation information stored in the reservation information storing block and transmitting the contents to the telematics terminal.

In accordance with another aspect of the present invention, there is provided a telematics contents reserving and transmitting method, including the steps of: a) storing contents provided from a contents provider (CP) and a contents list based on the contents; b) reading the stored contents list based on the contents transmitting/reserving request signal, transmitting the contents list to a requesting part, receiving a reservation of specific contents to be transmitted to a telematics terminal and storing reservation information; and c) reading the contents based on the stored reservation information and transmitting the contents to the telematics terminal.

Advantageous Effects

Since the present invention stores reservation information transmitted from a user and transmits reservation contents to a telematics terminal at reservation time, the telematics terminal can receive/store the contents in an idle condition in advance and conveniently use the contents without transmission delay.

Description of Drawings

The above and other objects and features of the present invention will become apparent from the following description of the preferred embodiments given in conjunction with the accompanying drawings, in which:

Fig. 1 is a block diagram showing a telematics system to which the present invention is applied;

Fig. 2 is a block diagram showing a telematics contents reserving and transmitting system in accordance with an embodiment of the present invention;

Fig. 3 is a flowchart showing a contents management process of a telematics contents reserving and transmitting methods in accordance with an embodiment of the present invention;

Fig. 4 is a flowchart showing a contents reserving process of the telematics contents reserving and transmitting method in accordance with the embodiment of the present invention; and

Fig. 5 is a flowchart showing a contents transmitting process of the telematics contents reserving/transmitting method in accordance with the embodiment of the present invention.

Best Mode for the Invention

Other objects and advantages of the present invention will become apparent from the following description of the embodiments with reference to the accompanying drawings. Therefore, those skilled in the art that the present invention is included can embody the technological concept and scope of the invention easily. In addition, if it is considered that detailed description on prior art may blur the points of the present invention, the detailed description will not be provided herein. The preferred embodiments of the present invention will be described in detail hereinafter with reference to the attached drawings.

Fig. 1 is a block diagram showing a telematics system to which the present invention is applied.

As shown in Fig. 1, the telematics system of the present invention includes a subscription terminal 100, a telematics contents reserving/transmitting system 200, and a telematics terminal 300.

The subscription terminal 100 accesses to the telematics contents reserving/transmitting system 200 by using a web browser and reserves transmission of specific contents.

The telematics contents reserving/transmitting system 200 manages the contents provided from diverse contents providers (CP) in the form of a list and receives a reservation request for transmission of specific contents by providing a contents list, which is managed by the telematics contents reserving/transmitting system 200 based on a contents reservation request from the subscription terminal 100, to the subscription terminal 100. Herein, the telematics contents reserving/transmitting system 200 receives telematics terminal information to transmit reservation contents, contents selection information, and contents transmitting/reserving time, receives the reservation request for transmission of the specific contents and stores the reservation information in a database managed by the telematics contents reserving/transmitting system 200.

Also, the telematics contents reserving/transmitting system 200 performs monitoring on the stored reservation information and transmits the contents whose reservation time is upcoming to the telematics terminal 300 when a wireless communication network is idle. A detailed structure of the telematics contents reserving/transmitting system 200 will be described hereinafter with reference to Fig. 2.

Meanwhile, the telematics terminal 300 receives and

stores reservation contents from the telematics contents reserving/transmitting system 200, and it restores the reservation contents when the reservation contents are completely transmitted and stored.

The telematics contents reserving and transmitting system of the present invention will be described in detail with reference to Fig. 2.

Fig. 2 is a block diagram showing a telematics contents reserving and transmitting system in accordance with an embodiment of the present invention.

As shown in Fig. 2, the telematics contents reserving and transmitting system of the present invention includes a reservation server 210, a transmission server 220, an Electronic Program Guide (EPG) database 230, a reservation database 240, and a contents database 250.

The contents database 250 stores contents provided from a contents provider (CP). Herein, the contents provided from the CP includes multimedia contents such as a video, an audio and an image, and a program module used in the telematics terminal 300.

The EPG database 230 manages a list for contents stored in the contents database 250. Herein, an integrated contents program list is generated and stored based on a standardized EPG form when the contents stored in the EPG database 230 is a broadcasting program, and based on a program list provided based on each CP when the contents stored in the EPG database 230 is the contents provided by the CP.

When the reservation server 210 receives a contents transmitting/reserving request signal through a web browser driven in the subscription terminal 100, the reservation server 210 reads a contents program list from the EPG database 230 and transmits the contents transmitting/reserving request signal to the subscription terminal 100. Subsequently, the subscription terminal 100

reserves transmission of specific contents to the telematics terminal 300 by using the contents program list transmitted from the reservation server 210. Herein, the reservation information of the subscription terminal 100 is stored in the reservation database 240 as a package form.

Meanwhile, the transmission server 220 reads the contents from the contents database 250 based on the reservation information of the package form, which is stored in the reservation database 240, and transmits the contents to the telematics terminal 300. Herein, the transmission server 220 transmits the reservation contents at reservation time designated by a user and a channel use bandwidth of a wireless communication network are considered.

Meanwhile, the telematics terminal 300 receives and stores the reservation contents from the transmission server 220 through the wireless communication network and outputs the reservation contents when the user makes a request. Herein, the telematics terminal 300 receives the reservation contents through the wireless communication network as a background, and it should support a session management function, in which an unstable communication condition is considered, and a function for updating a performance program list for each contents.

The entire operating process of the present invention will be described with reference to Figs. 3 to 5.

Fig. 3 is a flowchart showing a contents management process of a telematics contents reserving and transmitting method in accordance with an embodiment of the present invention.

When contents database 250 executes a contents management process at step S301 and a signal requesting contents update such as addition, deletion and update is inputted from the outside such as a contents provider at step S302, a contents program list is reorganized at step

S303.

Also, a process for updating the contents database 250 by adding new contents, deleting specific contents or updating pre-stored contents based on the contents update request signal inputted from the contents provider is executed, and the EPG database 240 is updated at step S304 by using the contents program list reorganized at the step S303.

Meanwhile, a process that reservation server 210 manages reservation information inputted by a user will be described hereinafter with reference to Fig. 4.

Fig. 4 is a flowchart showing a contents reserving process of the telematics contents reserving and transmitting method in accordance with the embodiment of the present invention.

When the reservation server 210 receives contents transmitting and reserving request signal from the outside, i.e., the subscription terminal 100, at step S402 in a condition that the reservation server 210 executes a contents reservation process at step S401, the reservation server 210 provides the contents program list by reading it from the EPG database 230 and receives reservation information at step S403. Herein, the reservation information inputted based on the contents transmitting/reserving request signal can be additional reservation information or reservation information for updating the existing reservation information.

At step S404, the reservation database 240 is updated by adding new reservation information by using the inputted reservation information or by updating the existing reservation information.

A process that the transmission server 220 transmits contents based on reservation information stored in the reservation database 240 will be described in detail with reference to Fig. 5.

Fig. 5 is a flowchart showing a contents transmitting process of the telematics contents reserving/transmitting method in accordance with the embodiment of the present invention.

The transmission server 220 operates the contents transmitting process at step S501 and searches whether reservation information whose reservation time is upcoming exists in the reservation database 240 at steps S502 and S503.

As a result of the steps S502 and S503, when the reservation information whose reservation time is upcoming exists, the contents are searched from the contents database 250 at step S504 and transmitted to the telematics terminal 300 at step S505. Subsequently, the logic flow goes to the step S502 and subsequent process is repeatedly operated.

Meanwhile, when the reservation information whose reservation time is upcoming does not exist, the logic flow goes to the step S502 after predetermined waiting time and the step S502 is repeatedly operated.

Since the present invention stores reservation information transmitted from the user, who accesses through the web browser, and transmits reservation contents to the telematics terminal at the reservation time, the telematics terminal can receive/store the contents in an idle condition in advance and the telematics terminal user can conveniently use the contents without transmission delay. That is, when the telematics service user gets on a vehicle after reserving contents transmission by using a personnel computer (PC) before getting on the vehicle, contents reserved to be transmitted are stored in the telematics terminal equipped in the vehicle. Therefore, the user can instantly use the desirable contents needless to receive the contents when getting on the vehicle.

As described in detail, the present invention can be

embodied as a program and stored in a computer-readable recording medium, such as CD-ROM, RAM, ROM, a floppy disk, a hard disk and a magneto-optical disk. Since the process can be easily implemented by those skilled in the art, further description will not be provided herein.

While the present invention has been described with respect to certain preferred embodiments, it will be apparent to those skilled in the art that various changes and modifications may be made without departing from the scope of the invention as defined in the following claims.

What is claimed is:

1. A telematics contents reserving and transmitting system, comprising:

a contents storing means for storing and managing contents provided from a contents provider (CP);

a contents list storing means for storing and managing a list of contents stored in the contents storing means;

a reserving means for reading the contents list from the contents storing means based on a contents transmitting/reserving request signal from outside, transmitting the contents list to a requesting part, receiving a reservation of specific contents to be transmitted to a telematics terminal and storing the reservation information;

a reservation information storing means for storing reservation information under control of the reserving means; and

a transmitting means for reading the contents from the contents storing means based on the reservation information stored in the reservation information storing means and transmitting the contents to the telematics terminal.

2. The system as recited in claim 1, wherein the contents stored in the contents storing means include multimedia contents provided from the CP and a program module used in the telematics terminal.

3. The system as recited in claim 1, wherein the contents list storing means stores and manages the contents list generated by integrating an EPG contents list based on a standardized Electronic Program Guide (EPG) form and a CP contents list provided for each CP with respect to the contents stored in the contents storing means.

4. The system as recited in claim 3, wherein the contents list storing means updates the stored contents based on a contents update request signal from the outside, and updates the contents list stored in the contents list storing means by reorganizing the contents list based on the updated contents.

5. The system as recited in claim 1, wherein the reservation information storing means stores the reservation information as a package form under the control of the reserving means.

6. The system as recited in claim 1, wherein the transmitting means searches reservation information whose reservation time is upcoming, from the reservation information storing means, read the contents from the contents storing means based on the searched reservation information, and transmits the contents to the telematics terminal at reservation time designated by a user in a channel use bandwidth of a wireless communication network.

7. A telematics contents reserving and transmitting method, comprising the steps of:

a) storing contents provided from a contents provider (CP) and a contents list based on the contents;

b) reading the stored contents list based on the contents transmitting/reserving request signal, transmitting the contents list to a requesting part, receiving a reservation of specific contents to be transmitted to a telematics terminal and storing reservation information; and

c) reading the contents based on the stored reservation information and transmitting the contents to the telematics terminal.

8. The method as recited in claim 7, further comprising the step:

d) updating the stored contents and the contents list based on a contents update request signal from the outside.

9. The method as recited in claim 7, wherein the contents are transmitted to the telematics terminal by searching whether reservation information whose reservation time is upcoming exists in the stored reservation information and reading the contents of the reservation information whose reservation time is upcoming at reservation time designated by a user in a channel use bandwidth of a wireless communication network in the step c).

FIG. 1

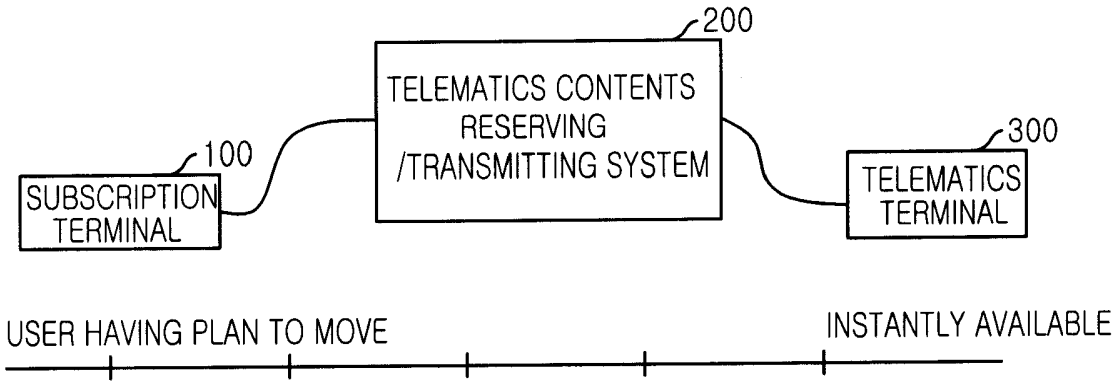

200
TELEMATICS CONTENTS RESERVING /TRANSMITTING SYSTEM
100
SUBSCRIPTION TERMINAL
300
TELEMATICS TERMINAL
USER HAVING PLAN TO MOVE
INSTANTLY AVAILABLE

FIG. 2

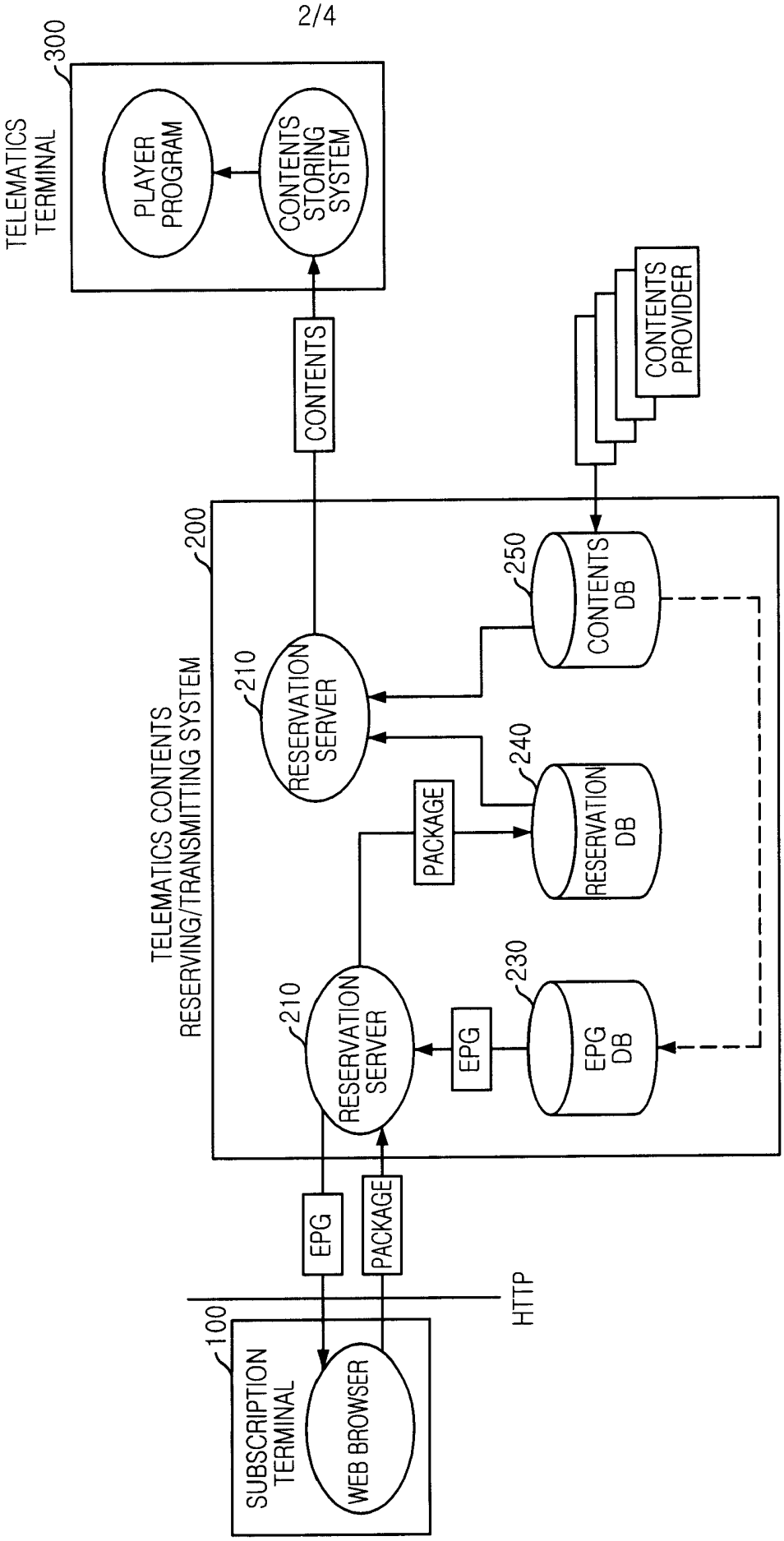

TELEMATICS TERMINAL
300
PLAYER PROGRAM
CONTENTS STORING SYSTEM
CONTENTS
CONTENTS PROVIDER
200
TELEMATICS CONTENTS RESERVING/TRANSMITTING SYSTEM
210
RESERVATION SERVER
250
CONTENTS DB
240
RESERVATION DB
PACKAGE
210
RESERVATION SERVER
230
EPG DB
EPG
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PACKAGE
HTTP
100
SUBSCRIPTION TERMINAL
WEB BROWSER

FIG. 3

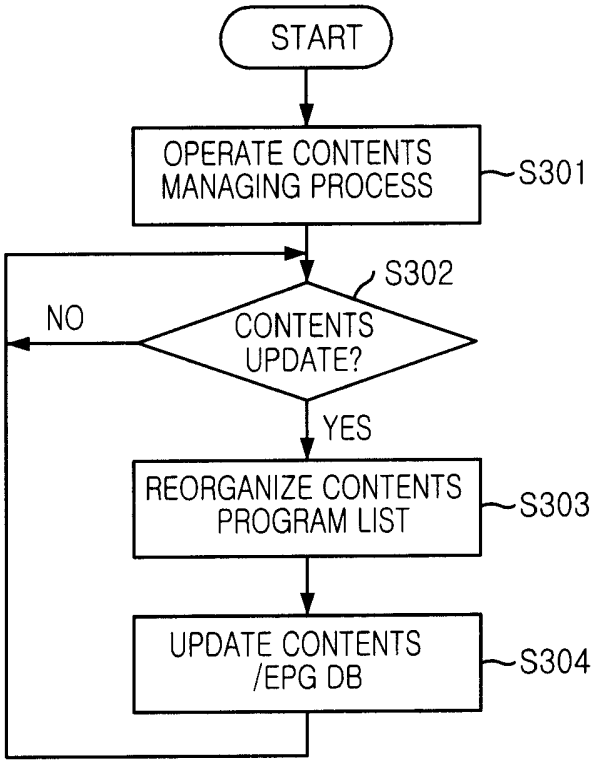

START
OPERATE CONTENTS MANAGING PROCESS
S301
S302
NO
CONTENTS UPDATE?
YES
REORGANIZE CONTENTS PROGRAM LIST
S303
UPDATE CONTENTS /EPG DB
S304

FIG. 4

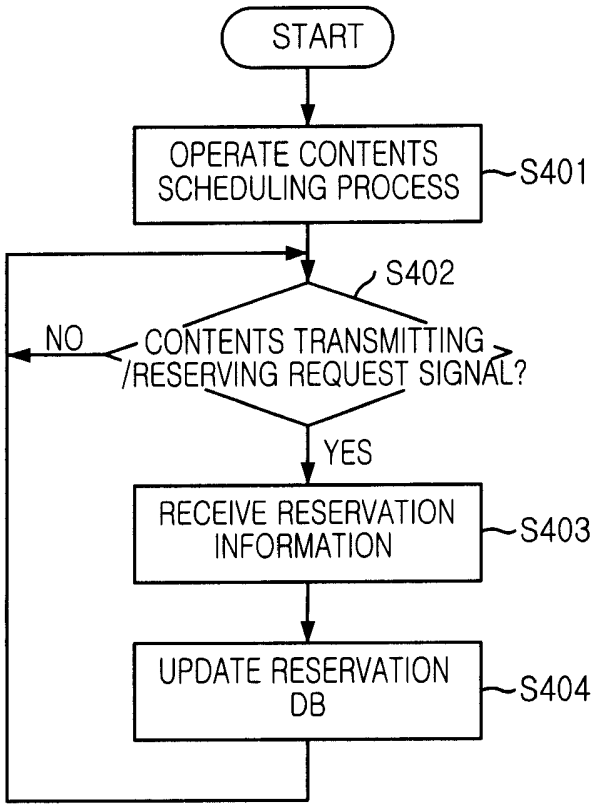
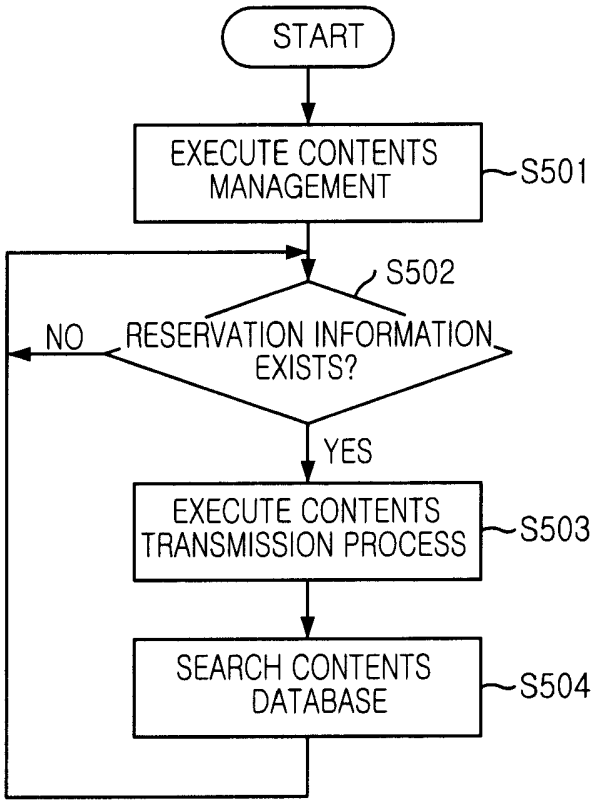

START
OPERATE CONTENTS SCHEDULING PROCESS
S401
S402
NO
CONTENTS TRANSMITTING /RESERVING REQUEST SIGNAL?
YES
RECEIVE RESERVATION INFORMATION
S403
UPDATE RESERVATION DB
S404

FIG. 5


START
EXECUTE CONTENTS MANAGEMENT
S501
S502
NO
RESERVATION INFORMATION EXISTS?
YES
EXECUTE CONTENTS TRANSMISSION PROCESS
S503
SEARCH CONTENTS DATABASE
S504

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/003536

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G06F 17/00

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)
IPC7 G06F 17/00 ; 19/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean patents and applications for invenions since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search terms used)
KIPODB ; telematic* & contents* & transmit*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03-12579 A (SIMPLE DEVICE INC.) 25 JUN. 2003 SEE THE SPECIFICATIONS & DRAWINGS 1 , DEFINITION PART.	1-9
A	KR 2004-9193 A (HYUNDAI MOVIS INC.) 31 JAN. 2004 SEE THE WHOLE DOCUMENTS	1-9
A	KR 2004-95673 A (HAMAN BAKER AUTOMOTIV SYSTEMS) 15 NOV. 2004 SEE THE WHOLE DOCUMENTS	1-9

☐ 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	Date of mailing of the international search report
15 SEPTEMBER 2005 (15.09.2005)	**16 SEPTEMBER 2005 (16.09.2005)**

Name and mailing address of the ISA/KR	Authorized officer
Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	JEONG, Jae Hoon Telephone No. 82-42-481-5787

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR2004/003536

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03-12579 A	03.2.13	EP 1410594 A	04.4.21
KR 04-95673 A	04.11.15	JP 04-342103 A	04.12.2
		EP 1475941 A	04.11.10