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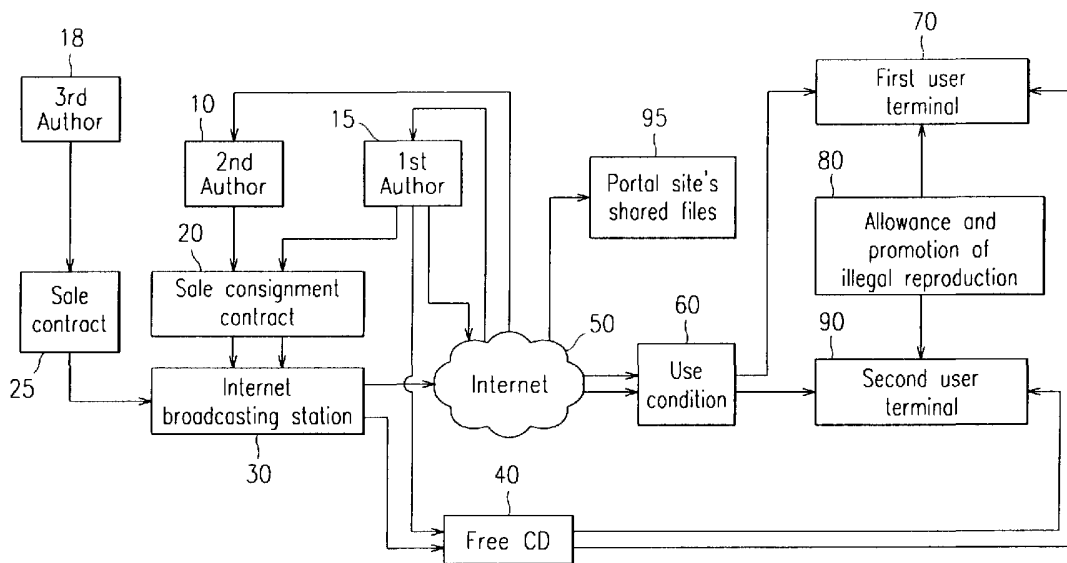
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(54) Title: CONTENTS CONSIGNMENT SALE SYSTEM AND METHOD FOR NETWORK BROADCASTING



(57) Abstract: Disclosed is an Internet broadcasting contents consignment sale system and method. An Internet broadcasting station makes a consignment sale contract with companies or individuals who have copyrights of authored pieces, such as computer and video game makers, filmmakers, music producers, television broadcasting stations, and publishers; generates the consigned authored pieces into specific contents data; allows users to use the contents data only through a specific execution program provided by the Internet broadcasting station; permits Internet users to download the contents data via wire and wireless Internet free of charge and keep them; and allows the users to use desired contents data by receiving restoration information on the Internet.

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## **Contents Consignment Sale System and Method for Network Broadcasting**

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### **CROSS REFERENCE TO RELATED APPLICATION**

This application is based on Korea Patent Application No. 2001-34363 filed on June 18, 2001 in the Korean Intellectual Property Office, the content of which is incorporated herein by reference.

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### **BACKGROUND OF THE INVENTION**

#### **(a) Field of the Invention**

The present invention relates to a contents consignment sale system and method for Internet broadcasting. More specifically, the present invention relates to a contents consignment sale system and method for Internet broadcasting for receiving sales consignments on authored pieces from authors who have programs available for Internet broadcasting, converting the pieces into a predetermined contents data format, providing them to Internet users so that they may select and store desired contents in HDDs (hard disk drives), CDs (compact disks), or DVDs (digital versatile disks) according to their interests, and allowing the users to use the contents through an exclusive execution program. When a user desires to use the contents through the exclusive execution program, the system and method enable the user to receive permission from an Internet broadcasting station and acquire restoration information corresponding to the contents through the Internet, so that the user may use the authored pieces.

25

**(b) Description of the Related Art**

Various categories of contents have been provided to users as the Internet has been recently developed, and the field with the most growth latency among them is the entertainment industry, with the biggest market and the biggest growth potential thereof being the music and movie industry .

Not long ago, Internet broadcasting stations provided small moving picture services such as with the film size of 56K, and as high-speed Internet has recently been popularized they have attempted to provide high-quality moving pictures with sizes such as about 300K or 500K. The picture quality, however, is worse than that of the DVD, and the image and sound qualities are worse than those of general videotapes.

When many users concurrently use the moving pictures at the same time, the Internet performance speed becomes slower so that the moving pictures are stopped, the sound may howl, and signals may sometimes be interrupted, thereby causing inconvenience to the user.

In particular, attempting to start a VOD (video on demand) business for receiving fees is problematic, because the current Internet transmission speed and services cannot satisfy the users.

The reason for this is that the moving pictures available on the Internet are very inferior to DVDs and videotapes, and off-line service providers already provide stereo and hi-fi videotapes and DVDs so that users may enjoy movies and music videos with high-quality images and sound data at any time they desire. Therefore, on-line movie rental services are not yet

developed.

To activate a VOD business, service providers must provide high-quality image and sound services that are much better than the hi-fi stereo videotapes and equivalent to the qualities of the DVDs, compared to the  
5 conventional moving picture services of 300K or 500K currently being provided by the Internet broadcasting stations.

Nowadays, cellular phones and PDA's enabling wireless Internet services are on the market, and in the near future, multimedia terminals capable of wireless Internet will be commonly installed in cars.

10 In America, more than one million cars with multimedia terminals have been sold, but the speed of the current wireless Internet service is much slower than that of the wire Internet service, and in particular, the Internet speed becomes further slower and the Internet is often disconnected because of the unstable state of wireless radio waves when the car is  
15 moving.

Cell phones, PDAs, and vehicular multimedia terminals for providing the wireless Internet service for providing high-quality moving pictures with quality images and sound data in fast moving cars have not yet been properly developed, but the wireless Internet services are involved in the very  
20 initial steps by providing such things as an electronic mail service and stock news, mainly for text communication with small data size, and wireless Internet terminals are currently being sold.

The user does not have much difficulty in using general text

information such as email, stock information, or news on the wireless Internet while the user is moving, but in the case of attempting to receive a moving picture service, it is required that the mobile station does not move at all but remains at a single place, or it may be moved at the slow speed of a person's normal walking. Currently, it is still difficult for the user to receive high-quality image and sound services.

Further, the wireless Internet tends to have frequent interference by radio waves generated by various electronic home appliances such as radios, TVs, computers or cell phones, as well as cables, and the radio waves may not easily propagate into a room in a building. Even when the radio waves enter a room, they may be easily reflected by a metallic desk or a concrete wall to generate various problems, and hence it is more difficult for the user to use the wireless Internet than the wire Internet, and the speed of the wireless Internet is slower than that of the wire Internet. In addition, in some cases, the user may not be able to use the wireless Internet at all in a basement.

The communication speed when the mobile station remains motionless may be faster according to the development of communication devices, but the above-noted problems may not be completely solved because of the characteristics of the radio waves.

In particular, in the case the user uses the wireless Internet multimedia terminal in a fast running car, since the multimedia terminal cannot fully receive the radio waves while the car is running fast, the data

transmission speed is greatly reduced. When the car passes through a tunnel or is on a street with many high buildings, turns around a mountain, goes through a low place, or passes between concrete walls, or when another car or a motorcycle passes closely by the car, there is substantial radio wave interference so that the user cannot receive various moving picture services such as quality movies, dramas, or music videos in the running car.

### **SUMMARY OF THE INVENTION**

It is an object of the present invention to provide an Internet broadcasting contents consignment sale system and method for receiving various authored pieces from authors as consignment, converting them into specific contents data, allowing users to either freely download and save them or freely transmit the data to each other through a reproduction process or the Internet, and enabling an Internet broadcasting station to exhaustively and thoroughly control the users' using the contents so that they may use the corresponding authored pieces with advertisements or for a fee.

It is another object of the present invention for high-speed Internet users as well as low-speed Internet users to use high-quality moving picture contents of premium image and sound data through an Internet broadcasting station according to the present invention.

It is still another object of the present invention to implement multimedia functions of quality image and sound through the wireless

Internet in a fast running vehicle without interference of instability of wireless signals or interruption of signals under bad wireless Internet environments, wherein the Internet transmission speed is severely reduced and signals are frequently interrupted by the user's motion because of unstable states of wireless radio waves, and accordingly the user can only receive a moving picture service when he remains still or walks very slowly.

In one aspect of the present invention, a network-broadcasting contents consignment sale system connected to authors for receiving a plurality of authored pieces and providing the authored pieces to user terminals, comprises: a contents data management server for converting a contents data structure of the authored pieces into a predetermined format, transmitting converted data to the user terminal, and generating restoration information for restoring the converted data structure; a data storage unit for storing restoration information for restoring the converted contents data; and a free-of-charge contents provider for providing the converted contents data to the user terminal through a network or a free-of-charge distributor, and wherein the contents data management server transmits the restoration information stored in the data storage unit to the user terminal when the user terminal accesses the contents data management server so that the contents data stored in the user terminal are restored to original contents data and are executed.

The restoration information resides in the user terminal's RAM (or it is temporarily stored in a HDD depending on the contents), and the

restoration information restores the converted contents data stored in the user terminal into the contents data of before conversion so that the user may use the contents data, and when the restoration information finishes all tasks, the restoration information is automatically and immediately deleted  
5 from the RAM or the HDD.

In another aspect of the present invention, in a network-broadcasting contents consignment sale system for transmitting a plurality of contents data to a user terminal connected on the network, recording the contents data on recording media including CD-ROMs or DVD-ROMs,  
10 distributing the contents data free of charge, and controlling users' using the contents data to obtain predetermined use fees from the users, a network-broadcasting contents consignment sale method comprises: converting the contents data's structure, separately generating restoration information (which selectively includes important data, editing codes, and numerical  
15 values, depending on the categories of the contents), and storing the restoration information for executing the converted contents data; transmitting the contents data having the converted data structure to the user terminal via the network or recording the contents data on various recording media including CD-ROMs or DVD-ROMs and distributing them to the user  
20 free of charge, when a transmission request on the contents data is input from the user terminal; and

transmitting restoration information (which selectively includes important data, editing codes, and numerical values, depending on the



categories of the contents) that corresponds to the contents data to which a use allowance request is input, to the user terminal so that the user may use the corresponding contents when the use allowance request for the contents data having the converted data structure is input from the user terminal.

5           The method further comprises transmitting advertisement data and the restoration information to the user terminal, and operating the user terminal to execute the contents and the advertisements, when the user selects to view the contents and the advertisements without paying the use fee of the contents data.

10           In the case of unifying a plurality of network broadcasting stations into a single relay broadcasting system, a plurality of network broadcasting stations are combined into a single huge network broadcasting station, and each network broadcasting station is applied as a single data storage unit. A relay broadcasting station is configured to manage all the members and uses  
15           in an integrated manner, and network users all over the world may use various contents provided by a plurality of member network broadcasting stations through a single membership entrance and perform fee settlement at a single homepage of the relay broadcasting station.

20           The relay broadcasting station provides technical support and use allowance for managing the above-noted relay broadcasting system, and it may receive technical use fees from the network broadcasting stations that provide the contents, and use fees for the specific execution program from the users (members).

The relay broadcasting station provides the network broadcasting technique supports according to the present invention to a plurality of network broadcasting stations to allow the network broadcasting stations of FIG. 2 to directly manage the network broadcasting, and to allow the users to use the specific execution program of FIG. 3. The user registers for a membership entrance of the relay broadcasting station so as to use and install a specific execution program, and when the user operates the specific execution program, a user terminal initially accesses the relay broadcasting station on the network to check whether the user is a registered member who has previously paid the membership fee, and if so, the user terminal receives a use allowance on the specific execution program to allow the user to access the network broadcasting station. The relay broadcasting station manages membership of the users who use the specific execution program, and the relay broadcasting station receives a predetermined amount of money from the network broadcasting stations as broadcasting technical commissions each month, and receives a predetermined amount of use fees from the users (members) each month to issue a program use allowance on the network, or receives broadcasting technical commissions and program use fees from the network broadcasting stations and the users.

20

### **BRIEF DESCRIPTION OF THE DRAWINGS**

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate an embodiment of the

invention, and, together with the description, serve to explain the principles of the invention:

FIG. 1 shows a block diagram of a contents consignment sale system according to a preferred embodiment of the present invention;

5 FIG. 2 shows a block diagram of an Internet broadcasting system according to a preferred embodiment of the present invention;

FIG. 3 shows a flowchart of a specific execution program according to a preferred embodiment of the present invention;

10 FIG. 4 shows a table for restoration information transmitted to a user terminal; and

FIG. 5 shows a relay broadcasting system according to a preferred embodiment of the present invention.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

15 In the following detailed description, only the preferred embodiment of the invention has been shown and described, simply by way of illustration of the best mode contemplated by the inventor(s) of carrying out the invention. As will be realized, the invention is capable of modification in various obvious respects, all without departing from the invention.  
20 Accordingly, the drawings and description are to be regarded as illustrative in nature, and not restrictive.

First, contents data provided on-line and off-line by an Internet broadcasting station will be described.

The fast Internet contents data that netizens who use the wire or wireless fast Internet download on the Internet free of charge and without restriction and transmit to their friends on the Internet or through reproduction on a compact disc (CD), in other words, all kinds of entertainment data including movies, dramas, music videos, comics, children's picture stories, photos and photo albums, novels, and computer and video games, are generated as follows.

Moving picture data such as movies or music videos operate at 25 frames per second, that is, about 25 continuous pictures are shown for each second of broadcast time. Comics, children's picture stories, novels, and photos and picture albums do not have continuous pictures, differing from the general moving pictures, but have still pictures or one-page texts for each page.

Hence, the present invention does not make comics, children's picture stories, and novels into still image data, but into a moving picture data file format of 25 frames per second or 10 to 2 frames per second (in this instance, the number of the frames may be varied.)

For example, in the case of making one-page comics into one frame of moving picture data, 500-page comics are made into 500-frame moving picture data. In other words, when the 500-page comics are made into moving pictures of 25 frames per second, they will be 20-second moving picture data, and if they are made into moving pictures of 2 frames per second, they will be about 250-second moving picture data.

In addition to the above-noted method, the comics, the novels, and the children's picture stories may be made into still image data maintaining the original format. In this instance, the contents may be used by scrambling the sequential order of the still image data to generate editing codes, by  
5 modifying numerical values of a predetermined portion of a picture data that configures a single still image, or by separating a portion of data from the picture data file to generate restoration information and allowing the user to receive the restoration information on-line and combine it with the converted contents data to generate the contents of before conversion.

10 When the comics, children's picture stories, novels, and photos and picture albums of a still image format are converted into moving picture files, the user is required to use the contents data frame by frame instead of executing the contents at 25 frames per second or 2 frames per second, that is, executing the contents in 20 or 250 seconds once in the like manner of  
15 execution of the general moving pictures.

Audio data may be stored in the children's picture stories, novels, comics, and photos and photo albums to output descriptions or narrative on the picture histories.

When attempting to make the moving picture programs such as  
20 movies, music videos, dramas, comics, photos and picture albums, and novels into specific contents data, an important portion is separated from the program data to form "an important data," and the remaining data are divided into dozens to thousands of units and scrambled in a random order

to generate the "editing codes," and the format of the data files is converted into various formats so that the data files may not be executed through general programs.

5 It is desirable to modify the format of the various contents not by a single method but in many different ways for the respective contents so as to prevent attacks by hackers. The specific execution program provided by the Internet broadcasting station may use all the above-noted converted formats.

10 In a different method, a single program is divided into dozens to thousands of units, the divided units are scrambled in a random order to generate editing codes, predetermined portions are separated from the respective units to generate "an important data," and the formats of the data files are modified to become different each other.

15 The important data may include a predetermined portion of the contents, for example, a portion of the data of about 0.2 to 3 second running time from the data having the total running time of 10 seconds, or it may include a portion of the actual data that forms audio signals or image signals.

20 In any of the above-described methods, if the separated data are not combined with the remaining data, the converted contents data are incomplete, and hence the contents data are not executed through any execution program, and if combined, the converted contents data become the original data, that is, the contents data of before conversion.

It is required for the specific execution program to receive the separated important data as restoration information that may be easily

combined, and when converting the converted contents data into the original format and executing the same at the user terminal, it is required for the specific execution program to convert the contents data into those of before conversion and execute them with no damage to the image and sound qualities.

The formats of the contents data may be modified in many ways, and it is important to completely prevent the Internet users from using private programs or public programs for illegally using the contents data, instead of using the specific execution program provided by the Internet broadcasting station according to the present invention.

Predetermined numerical values are applied to the various data values of the contents data to convert the data. The data include audio signals, image signals, and programs (in the case of video games or computer games), and it is important to convert the contents data, allow no user to use the contents data normally if the converted contents data are not converted into the original format, and completely restore the contents data into those of before conversion using the restoration information.

In order to download various categories of contents data to the terminal on the Internet and execute them when they are stored in the terminal, the user uses the specific execution program to access the broadcasting station according to the present invention, obtain a use allowance, determine whether to pay a use fee or view the contents together with advertisements, and additionally receive restoration information

(including editing codes, numerical values, and important data) for restoring the contents data structure. In this case, the user receives one, two, or three kinds of the above-noted restoration information depending on the categories of the contents.

5           When attempting to view the contents together with the advertisements without paying the use fee, the user receives the restoration information and customized advertisement data to view the advertisements and the contents together.

10           The important data in the restoration information may be a single unit, but it is more desirable for the important data to include a plurality of small data so as to increase effects of preventing reproduction.

15           For example, when moving picture data of a total of 90 minutes are divided into 540 units, the running time of each unit is about 10 seconds, and in this instance, the running time of one unit may be 8.12 seconds in one case and it may be 11.84 seconds in another case. As described, the running time of each unit is randomly generated within plus or minus 20 to 30%, and the important data are preferably generated by separating the data that correspond to the amount of about 0.2 to 3 seconds for each data of 10-second running time.

20           Hence, the specific execution program initially executes the contents data downloaded to the user terminal, and concurrently receives the important data via the Internet to temporarily store them in a RAM, and when a corresponding order comes, the specific execution program supplements



the contents data with the important data to execute the supplemented contents data, then automatically deletes the important data from the RAM. It previously receives important data of a subsequent order and stores them in the RAM, and when the corresponding order comes, it supplements the important data of the subsequent order to the contents data to execute the supplemented contents data. In addition, about 1 to 15 frames per 40 to 60 frames are separated as the important data for later use, and further modified methods may be used according to the present invention.

When the specific execution program is executed, the user terminal obtains a use allowance, immediately receives the editing codes and the numerical values on-line, stores them in the RAM, receives important data to be supplemented, stores them in the RAM, supplements the important data to the contents data to execute them in the proper order, and deletes the important data from the RAM, and in this case, the categories and number of the restoration information (editing codes, numerical values, and important data) may be varied according to the categories of the contents.

When the amount of the important data is too big to be temporarily stored in the RAM, the user terminal randomly selects a desired directory from a program that has many directories such as Windows programs or another desired one, converts the important data into a hidden file format, temporarily stores the same in the above-noted directory, shows them to the user when its proper order comes, and immediately deletes the important data from the corresponding directory.

For further detailed description, the user terminal randomly stores the important data in any place and without any predetermined order and deletes them after use, and it previously receives first important data, temporarily stores them in the HDD, and executes the specific execution  
5 program to show the important data to the user, and then deletes the shown important data from the HDD. It subsequently receives second important data, temporarily stores them in the HDD, shows them in the appropriate order, and deletes them, so that the user may not easily find the data and reproduce the same.

10 What is important in this case is that the important data preferably reside in the RAM and are deleted in the default manner, and when the amount of the important data of the contents used by the user is too big to be temporarily stored in the RAM and must accordingly be temporarily stored in the HDD, it is shown to the user in its appropriate order and then deleted.  
15 Various kinds of restoration information including the contents data, the important data, the editing codes, and the numerical values currently used by the user are not to concurrently reside in the user terminal for more than 0.001 second, and therefore, it is required to divide the important data into many units.

20 In addition, programmers may modify the important data according to corresponding environments in many ways.

What matters here is that the Internet broadcasting stations are to produce and manage the contents data so that the user may execute them

when the user receives restoration information on-line, in order for the Internet broadcasting stations to perfectly control the users all over the world.

Second, in order for wire and wireless low-speed Internet users to freely use the contents data, the Internet broadcasting stations according to the present invention produce the contents data for telephone modem users and low-speed Internet users, as follows.

The data that form a program are divided into dozens to thousands of units, the units are scrambled in a random order, and the format of the data files is converted into an individual one. In this instance, the contents data are converted by applying a predetermined numerical value to the data values (including still image data and moving picture data), and this process may be possible or not depending on the contents.

It is desirable to allow no one to normally use the contents data without permission except when any user purposely damages the converted audio or image signals to convert them back into the original format.

To make the important data have a lesser size and better effects, a very small portion of the data that correspond to either or both of the image signals and the audio signals are separated to make them the important data.

Therefore, when attempting to use the contents data, the users use the specific execution program to access the Internet broadcasting station according to the present invention, checks membership status to obtain a use allowance, and determines whether to pay a use fee or view the contents data together with the advertisements. In this instance, the user is

also required to receive the important data, the editing codes, and the numerical values for restoring the contents data structure. When desiring to view the advertisements instead of paying the use fee, the user is required to receive corresponding advertisement data. Here, the restoration information  
5 includes one, two, or all of the important data, the editing codes, and the numerical values depending on the contents. As the categories of the restoration information increase, the function for protecting the contents data from hackers becomes better.

The Internet broadcasting station according to the present invention  
10 records various contents data produced through a predetermined method on various recording media such as CD-ROMs, CD-RWs, DVD-ROMs, and DVD-RWs, and distributes them free of charge for promotion so that many users may easily use them. The Internet broadcasting station also allows and promotes any kind of unauthorized reproduction of the contents data so that  
15 the users may reproduce the contents free of charge and share them with their friends without authorization

The Internet broadcasting station uploads high-speed Internet contents data and low-speed Internet contents data so that the low-speed Internet users may also request their high-speed-Internet-using friends to  
20 download various contents data for them, and thereby keep the contents data freely. The high-speed Internet users may use both high-speed Internet contents data and low-speed Internet contents data.

Third, in order for the high-speed and low-speed wire and wireless

Internet users to freely download and use various computer and video games, and personal and business programs, the Internet broadcasting station according to the present invention generates various programs, as follows.

5           A predetermined portion without which the program may not operate is separated from the program, or predetermined numerical values of data in the program are changed so that the program may not operate without a use allowance provided by the Internet broadcasting station. Therefore, to normally operate the program, it is required that dozens to hundreds of  
10 numerical values such as secret codes be supplemented, or that the separated portion of the program be supplemented.

The program may be designed to operate when the numerical values or the separated portion is supplemented, or preferably when both the numerical values and the separated portion are supplemented. The above-  
15 noted game or business programs are designed to start their operation only with the specific execution program provided by the Internet broadcasting station according to the present invention, and the users are allowed to freely download the game programs and the business programs produced through a specific method and keep them.

20           The Internet broadcasting station according to the present invention records the business and game programs on various recording media such as CD-ROMs and DVD-ROMs, and distributes them to many users free of charge. The Internet broadcasting station allows and promotes the

unauthorized reproduction of the programs so that the business and game programs may be stored in the HDDs, the CD-ROMs, and the DVD-ROMs of the user terminals.

Accordingly, when attempting to use the game and business programs, the user is required to use the specific execution program to  
5 access the Internet broadcasting station, check membership status, obtain a use allowance, determine whether to pay a use fee or view advertisements together with contents, and receive on-line one or both predetermined numerical values of data for restoring the converted program structure of the  
10 game programs and the business programs and a portion of the program, and when the user determines to view the advertisements without paying the use fee, additionally receive the advertisement data to view the advertisement data together with the game program or the business program.

In the process for generating restoration information, it is required to  
15 apply no routine to the process when dividing the contents data into a plurality of units and scrambling them to generate the editing codes, when separating the important data from the contents data and when modifying the numerical values. Namely, by differentiating the restoration information and the numerical values for the respective contents data, attacks by hackers  
20 who attempt to solve the converted contents data will be blocked.

FIG. 1 shows a block diagram of a contents consignment sale system for Internet broadcasting according to a preferred embodiment of the present invention.

An operation of the contents consignment sale system will now be described.

5 First, the Internet broadcasting station 30 enters into a sale consignment contract 20 with the authors 10 and 15, and converts their authored pieces into specific contents data.

The Internet broadcasting station 30 allows many users to freely download or receive the contents data wirelessly or through the wire Internet 50.

10 The Internet broadcasting station 30 also saves the specific contents data on recording media such as CD-ROMs and DVD-ROMs 40, and freely distributes them to places where many Internet users gather such as computer shops, computer program shops, or computer book stores.

15 Further, the Internet broadcasting station 30 exceptionally and aggressively allows the users to reproduce the specific contents data freely distributed on the Internet and the CD-ROMs without formal permission 80 by the Internet broadcasting station 30, and promotes unauthorized reproduction 80 (transmitting and receiving data through reproduction of CDs, DVDs, the Internet, etc.) so that the users may reproduce the specific contents and share them with friends.

20 Also, the Internet broadcasting station 30 uploads contents data and specific execution programs to the shared file directory 95 at any time so that the many Internet users may use them freely and conveniently, and accordingly stores as much contents data in their HDDs as possible.

When the user attempts to use the contents, a use condition 60 is required. That is, the user must either pay for the contents or view a customized advertisement sent by the Internet broadcasting station 30 together with the contents. If not, the contents may not be used. In order to execute this complete control, the Internet broadcasting station 30 converts the various programs provided by the authors into specific contents data that the users may only use through a specific execution program.

The authors are classified into several categories. The first author 15 owns the first author's server, and the first author converts various programs possessed by the first author into specific data using the technique according to the present invention, and directly provides the converted data to users through the Internet 50.

However, when the user uses the contents data, it is required for a user terminal to receive restoration information on the Internet 50. The first author stores restoration information in a data storage unit of the Internet broadcasting station 30, and when the user executes a specific execution program, the first author allows the user terminal to automatically access the Internet broadcasting station 30 so as to obtain restoration information.

In order for the many users to use the author's programs and to get more profit, the first author stores the contents data on various recording media including CD-ROMs and DVD-ROMs 40 and distributes them free of charge.

Also, the first author uploads the contents data and the specific



execution programs to well-known portal sites' shared file directories 95 frequently to make them public so that many users may easily obtain desired contents data.

5 The first author mostly includes big companies such as movie companies, television broadcasting stations, and huge publishers rather than individuals.

The second author 10 mainly includes small companies or individuals who possess many authored pieces, and the second author 10 does not directly provide the contents data to the users, but uses the server of the Internet broadcasting station 30.

10 In the case of the first and second authors 15 and 10, the first fee and advertisement profit manager 199 of FIG. 2 of the Internet broadcasting station controls the computers of the first and second authors 15 and 10 in real-time so that the authors may monitor the categories and the frequency of use of the contents used by the users, and so they may know how much 15 in fees and advertisement profits are deposited, in real-time.

Further, the first fee and advertisement profit manager 199 supports the authors to check the programs' popularity, that is, the frequency of use, with graphs for each time and day so that the authors may refer to them for 20 publicity campaigns and program production and planning, and produce better programs with reference to them.

The third author 18 generally includes very small companies or individuals who have several programs, and in this case, the third author

sells the programs possessed by the third author to the Internet broadcasting station by one-time allowance or by installment.

In certain cases, some companies or individuals may provide their programs free of charge so as to widely promote or propagate their works. For example, singers frequently release their music videos so as to publicize their songs.

FIG. 2 shows a block diagram of an Internet broadcasting contents consignment sale system (in other words, an Internet broadcasting station) according to a preferred embodiment of the present invention.

The Internet broadcasting station 200 is connected to a user terminal 100 and a contents provider 300 through the Internet 110.

The Internet broadcasting station 200 comprises: a first web server 130; a first CD and DVD producer 140; a program manager 150; an advertisement data manager 160; a member and use information manager 170; a program and advertisement data producer 198; a first fee and advertisement profit manager 199; a contents data management server 180; and a data storage unit 190.

The contents provider 300 comprises: a second web server 310; a contents data manager 320; a second contents database 330; a second CD and DVD producer 335; and a second fee and advertisement profit manager 340.

The first web server 130 performs a web access function for a plurality of user terminals 100 to access the contents provider 300 through

the Internet 110, and it transmits various contents data, corresponding restoration information, and specific execution programs provided by the Internet broadcasting station 200 to the user terminal 100.

5 The program manager 150 provides a specific execution program to the user terminal 100. The specific execution program is needed for using the contents when the users desire to do so after they freely download various contents data such as movies, music videos, comics, and novels that are produced in a specific manner to their computers from the Internet broadcasting station, to collect them and store them.

10 In order to use the contents data, users all over the world register themselves to the Internet broadcasting stations, download the specific execution program to their computer 100, and install the same.

15 When the user attempts to use the downloaded contents data, it is required for the user either to pay the fee for using the contents or to view the advertisement together with the contents, and when the user accordingly selects to view the advertisement together with the contents without paying the fee, the advertisement data manager 160 transmits a customized advertisement that creates the best advertisement impacts to the user terminal 100 using member information.

20 In this instance, since the customized advertisement is well known to persons skilled in the art, no corresponding description will be provided. In some cases, the user is required to pay a predetermined fee depending on the categories of the contents such as new-release movies and recent music

videos.

The member and use information manager 170 manages all kinds of member information provided when the Internet users register on the Internet broadcasting station, and manages the categories of the contents data downloaded by the members, the frequencies of use on the contents data, categories and frequencies of use of the advertisement data viewed by the members, and fee history for each time and date.

The contents data management server 180 comprises: an important data manager 181 for separating an important portion from the contents data, and transmitting the important portion as restoration information; an editing code manager 182 for generating editing codes of the contents data, and transmitting the editing codes as restoration information to the user terminal 100; a numerical value manager 183 for converting the numerical values of the contents, and transmitting the numerical values for restoring the converted numerical values into an original format as restoration information to the user terminal 100; a contents data converter 184 for converting various programs (or contents) consigned by the authors into specific contents data, and transmitting them to the user terminal 100; and a contents introducer 185 for generating descriptions of the contents, transmitting the descriptions to the user terminal as restoration information, and when a request for transmitting the contents data or a request for using them is provided by the user terminal 100, enabling the user terminal to receive the requested contents data and corresponding restoration

information.

The data storage unit 190 comprises: a program database 191 for storing specific execution programs; an advertisement database 192 for storing various advertisement data; a member and use information database  
5 193 for storing member and use information; an important data database 194 for storing important data; an editing code database 195 for storing editing codes; a numerical value database 196 for storing numerical values; a contents data database 197 for storing the converted contents data; and a contents database 185-1 for storing description data for introducing the  
10 contents data, and storing restoration information corresponding to the contents data.

The program and advertisement data producer 198 produces a specific execution program and various advertisement data and uploads them to the program database 191 and the advertisement data database  
15 192.

The first fee and advertisement profit manager 199 calculates all necessary items in real-time such as date, time, number of times, and what categories of the contents data the user uses, how much the user pays for the corresponding fee, how many times and what advertisement the user  
20 views, how much advertisement income and use fees are generated, and how much the total profit is. The first fee and advertisement profit manager 199 controls computers of the contents providers 300 and analyzes in detail how much earnings are generated after the prior settlement up to the present

state, and notifies the second fee and advertisement profit manager 340 of analysis results in real-time.

The CD and DVD producer 140 records promotional contents data on CD-ROMs, DVD-ROMs, and other huge-volume recording media so that  
5 the Internet broadcasting station may lead more users to utilize the contents data.

The free-of-charge distributor 120 includes computer shops, software shops, or computer bookstores where the Internet users may get CD-ROMs or DVD-ROMs that contain the above-noted contents data free of  
10 charge.

The contents provider 300 comprises a second web server 310, a contents data manager 320, a second contents database 330, a second CD and DVD producer 335, and a second fee and advertisement profit manager 340.

15 The second web server 310 allows the user terminals 100 of the Internet users all around the world to access the contents provider via the Internet 110.

The contents data manager 320 transmits the contents data provided by the contents provider to the user terminal 100.

20 The second contents database 330 stores great volumes of contents data that the users may download to their computers on the Internet or acquire them through recording media such as CD-ROMs or DVD-ROMs.

The second CD and DVD producer 335 records on the recording

media the contents data that are provided to the users for the promotional purpose through the free-of-charge distributor 120.

The second fee and advertisement profit manager 340 receives signal data from the first fee and advertisement profit manager 199 of the Internet broadcasting station 200, and allows the contents provider to monitor how much earnings are gained, what contents and how many times the users use, how much in fees the users pay for viewing the contents, how many users view the advertisements and use the contents, and the users' frequencies of use on the respective contents by time and by date.

The user terminal 100 includes: a notebook computer or a desktop computer used for homes, offices, factories, and schools; a server computer supporting wire or wireless Internet; a wireless Internet portable phone terminal; a wireless Internet PDA terminal; and a wireless Internet multimedia terminal (a transformation of a personal computer) installed in a car.

An operation of the specific execution program in the Internet broadcasting contents consignment sale system (referred to as an Internet broadcasting station hereinafter) will now be described with reference to FIG. 3.

First, the user downloads various desired contents data provided by the Internet broadcasting station 200, the contents provider 300, the free-of-charge distributor 120, or friends to an HDD of the user's terminal 100, receives the contents data from them via CD-ROMs, or reproduces them to save them in the HDD of the user's terminal 100.

When attempting to use the contents data downloaded from the Internet broadcasting station, the user receives a specific execution program and installs the same in the user terminal 100.

5 When the specific execution program is performed in the user's terminal 100 in step S500, a CPU (central processing unit) of the user computer initially checks a connection state to the Internet in step S510.

When the Internet is not connected, the user terminal 100 issues a first warning to access the Internet in step S520, and terminates the current task in step S650.

10 In this instance, when it is connected, the user computer accesses the Internet broadcasting station 200 in step S530.

Next, the user selects whether to execute the previously downloaded and stored contents data or to download new contents data in step S540.

15 Here, if the CPU of the user terminal 100 has a very fast processing speed and the Internet has a very fast transmission speed, the user may select both methods at the same time, but in the present embodiment, the user is assumed to select one of them.

Initially, in order to execute the downloaded contents data, the user selects the option of contents execution.

20 The user selects desired contents from among the contents data downloaded and stored in the HDD, or transmitted through the CD-ROMs or the DVD-ROMs in step S550.

The operation of the user terminal 100 when the user attempts to



select desired contents will now be described.

Each time the user clicks the title of the contents data stored in the HDD, the CD-ROM, or the DVD-ROM, the user terminal 100 receives data corresponding to descriptions of the contents data from the contents  
5 introducer 185 of the Internet broadcasting station in step S560, and displays a brief description together with images of important scenes. Therefore, the user refers to them to select desired contents data by clicking a mouse button twice.

When the user inputs an ID and a password that are provided to the  
10 user when the user performs the membership entrance, the member and use information manager 170 performs a use-allowance process to find whether the user is a registered person in step S570.

When the user's membership is confirmed, the user terminal 100 searches data of the restoration information corresponding to the contents  
15 data selected by the user from the contents introducer 185, and receives corresponding restoration information from the contents data management server 180 in step S580.

The actual restoration information includes editing codes, numerical values, and important portion data, and it may include one, two or all of them  
20 according to categories of the contents, and it is preferable to use all of them so as to prevent hacking.

The member and use information manager 170 asks a settlement method of the user when the user terminal 100 receives the restoration

information. That is, the member and use information manager 170 provides the user with options such as paying the fee through a credit card or other methods, and viewing the contents together with advertisements.

5 In this instance, when the user selects the option of viewing the contents together with advertisements, the advertisement data manager 160 transmits the restoration information including the advertisement data to the user terminal 100, and the user terminal 100 receives them and stores them in the HDD.

10 It is preferable to temporarily store other restoration information except the advertisement data and the contents data not in the HDD but in a RAM so as to immediately and automatically delete them after use.

15 When the corresponding settlement is finished, the user terminal 100 receives the restoration information in step S580, and converts the stored contents data into contents data of before conversion and immediately executes them in step S590.

20 When the user selects a temporary pause, the user terminal 100 automatically deletes restoration information excluding the advertisements so as to prevent incursion by hackers. When the user executes a "play" instruction again, the user terminal receives the restoration information again, and executes the contents data from the pause point.

If detecting a copy instruction for hacking, or other kinds of task instructions while executing the contents data, the user terminal 100 stops all executions, deletes the restoration information, and immediately terminates

the operation in step S650.

When the execution of the contents data is finished, the user terminal 100 checks use information such as categories and number of advertisements viewed by the user while viewing the contents, whether the user pays the fee for using the contents, how many hours and times the user uses the contents in step S610, and when the contents are completely executed, the user terminal 100 terminates the contents-using service in step S620.

Next, the user terminal 100 transmits the use information checked during the above stage to the member and use information manager 170 of the Internet broadcasting station 200 in step S630.

When the user's use allowance is rejected in the previous step S570, the member and use information manager 170 allows the user to enter the membership and use the corresponding service, it notifies the user of the incorrect ID and password and to check them again, it describes settlement methods, or it issues a second warning message that matches the corresponding situation in step S600, and then it terminates the operation in step S650.

In the case of using computer game programs or business programs, when the use allowance step S570 is finished, the user terminal 100 executes the contents data in step S590 to start a computer and video game or a business program.

Next, the user terminal 100 combines the restoration information

received after checking the membership with the game program or the business program to convert the modified or incomplete game program or business program into a normal program and execute the same.

5 The user terminal 100 checks the use information in step S610 in the identical manner of other contents when the game program or the business program is finished, and the steps S620 and S630 are performed, and the above process is terminated in step S650.

10 However, in the case of a game program, the game may be finished once within a very short time period in the contents data execution step S590, and accordingly, the time and the execution of the game may be linked together.

15 In other words, if the user easily finishes the game in a minute, the user is allowed to execute the game for a further several times for about 30 minutes without performing the step S570 of use allowance, and if the user is playing a game when 30 minutes elapses, the use of the game program is terminated in step S620 when the user finishes the game.

However, these items (e.g., use time, use number, etc.) may be determined or varied according to autonomous business policies of the Internet broadcasting station 200.

20 On the other hand, when desiring to receive new contents data in the selection step S540, the user may access the Internet broadcasting station's homepage to select desired contents data from among various contents data in step S660 and freely download them.

In this instance, when the user clicks the desired contents' name, the user terminal 100 receives a description of the corresponding contents from the contents introducer 185 in step S670, and introduces the contents to the user so that the user may adequately select desired contents.

5           The user then selects again in step S665 whether to only download the contents data or to download the contents and view them concurrently.

An operation of downloading only will now be described.

The user clicks the name of the desired contents data twice, and the contents data converter 184 loads corresponding contents from the contents data database 197 and downloads them to the user terminal 100 in step  
10           S680.

Also, while the user terminal 100 downloads the contents data, the advertisement data manager 160 transmits advertisement data to the user terminal 100 as restoration information in step S670, and the user terminal  
15           100 executes them to display a moving picture advertisement on a screen in step S690.

In this instance, the number and categories of advertising are established according to the Internet broadcasting station's business policies.

When the downloading is finished in step S700, the user terminal  
20           100 transmits to the member and use information manager 170 information such as the category and the number of the downloaded contents and the advertisement data executed during the downloading in step S710, and terminates the downloading in step S650.

When attempting to use the contents while downloading the same in the selection step S665, the user is initially required to receive a use allowance in step S720.

Here, the user inputs an ID and a password given to the user at the time of membership entrance. When the user's membership is confirmed, the user terminal 100 finds data on the restoration information corresponding to the contents data selected by the user from the contents introducer 185, and receives corresponding restoration information from the contents data management server 180 in step S722.

The user terminal 100 starts to receive the restoration information and asks a settlement method of the user to find whether the user will pay the fee for using the service or if the user will view the contents together with the advertisement, and in the case of paying the fee, whether the user will settle the same using a credit card or with another settlement method.

In this instance, when the user selects to view the contents together with the advertisement, the user terminal 100 receives the advertisement data as restoration information and stores the same in the HDD.

The restoration information comprises important portion data, numerical values, editing codes, advertisement data, and contents description data. The remaining restoration information excluding the advertisement data and the contents description data is preferably stored not in the HDD but temporarily in the RAM, and it is deleted immediately after it is used. When the settlement is finished, the user terminal 100 receives

restoration information in step S722, and uses the editing codes to virtually form a data file that has a time (frame) and a format identical with those of the actual contents data, and store them in the HDD in step S723.

The user terminal 100 uses the editing codes to receive the contents data selected by the user from the contents data management server 180 of the Internet broadcasting station 200 in the actual order and section by section, and it edits them and arranges the same in disorder into a virtual moving picture file generated in the user terminal's HDD in step S724.

When the contents data are stored to a certain extent, the user terminal 100 executes the contents data in step S725. That is, the user terminal 100 displays the advertisement, and adds an editing code, a numerical value, and important portion data to execute the contents data as if they are an original program.

When the user temporarily pauses execution of the contents data while they are reproduced, the user terminal 100 deletes virtual files and restoration information except advertisement data and contents introducing data so as to prevent attacks by hackers, if any.

When detecting a copy instruction or other kinds of task instructions for the purpose of reproduction and hacking while executing the contents data, the user terminal 100 deletes restoration information except contents introducing data and advertisement data, stops all the current executions, and terminates the process in step S650.

When the execution of the contents data is almost finished, the user

terminal 100 checks in step S726 for all kinds of use information such as categories and iteration number of advertisements viewed by the user together with the use of the contents, whether the user uses the contents after paying the fee, and how many hours the user uses them, and when the execution of the contents data is completely finished the user terminal 100 terminates the use of the contents data in step S727 and it transmits use information checked during the current operation to the member and use information manager 170 of the Internet broadcasting station 200 in step S728.

10           When the use allowance is rejected in the use allowance step S720, the user terminal 100 displays the rejection reason about the use allowance on the screen in a message format, generates a third warning message in step S721, and terminates the operation in step S650.

15           As shown in FIG. 4, the configuration of the restoration information described above comprises editing codes, numerical values, contents data, important data, and advertisement data, and the configuration may be added, deleted, or modified if necessary.

20           FIG. 5 shows an example for applying the Internet broadcasting station to a configuration of a relay broadcasting system, and a method for performing relay broadcasting will now be described in detail.

          When attempting to execute the specific execution program at the user terminal 100 in the case of applying the relay broadcasting system, the user is initially required to register for a membership to the relay



broadcasting station 980 before installing the specific execution program.

When the user operates the installed specific execution program, the user terminal 100 accesses the relay broadcasting station 980 to receive all contents data, be permitted to obtain a use allowance, receive restoration  
5 information, and settle the fee to the relay broadcasting station to use all categories of contents. The Internet broadcasting stations 910 to 930 may not necessarily possess their own homepage, but have a contents data storage unit and a restoration information data storage unit. The relay broadcasting station 980 directly manages all users' member and use  
10 information, and the users may receive all categories of contents data provided by a plurality of Internet broadcasting stations through a single homepage of the relay broadcasting station, obtain a use allowance, and receive restoration information. The relay broadcasting station 980 receives settled use fees on the contents data from the users, keeps a predetermined  
15 portion as commission, and provides remaining portions to the respective Internet broadcasting stations 910 to 930 that provide the contents data depending on the used amounts of contents data.

Also, when desiring to receive monthly membership fees from the many Internet broadcasting stations and the specific execution program  
20 users instead of relaying the contents data, the relay broadcasting station allows the Internet broadcasting stations all around the world to use the method according to the present invention, provides technical support, and in return receives a predetermined portion of sales as a royalty.

Further, the relay broadcasting station may allow the Internet users to use the specific execution program and receive a predetermined portion of money each month as a program use fee (determined by the relay broadcasting station according to national incomes, such as 5 dollars in the U.S., and 2000 won in Korea.)

To achieve this method, a relay broadcasting station is provided, and all the specific execution programs are configured to be executed when the user is registered to the relay broadcasting station and installs the execution program. Each time the execution program is executed, the user terminal initially checks whether the user is a registered member who accessed the relay broadcasting station on the Internet and has paid the membership fee or an unregistered member who has not paid the membership fee, and allows the program to be executed for the registered member.

In this instance, the Internet broadcasting stations 910 to 930 comprise an Internet broadcasting contents consignment sale system of FIG. 2 for providing the Internet broadcasting service according to the present invention.

The terminal in which the specific execution program is installed as shown in FIG. 3 comprises a wireless PDA 940, a wireless Internet mobile station 950, a wireless Internet multimedia terminal 960 for vehicles, a user terminal 970, an Internet set-top box A 973, and an Internet set-top box B 976.

The above-noted terminals are wire or wirelessly connected to the

relay broadcasting station 980 on the Internet 900. The user terminal 970  
comprises desktop computers used for offices, homes, factories, and other  
places, notebook computers, and various kinds of servers. The Internet set-  
top box A 973 may generate high-quality outputs through output ends such  
5 as a VHS end, an S-VHS end, a DV end, and an HDTV end, and it may be  
used for general or commercial purpose so that the users may view various  
moving pictures or play video games or various computer games at home, in  
the office, or in a game room. The Internet set-top box B 976 enables a  
premium, wider, and magnifiable screen so that it may be combined with a  
10 professional big video projector for business purpose only, and it may display  
moving pictures such as movies or music videos in a small theater. When  
high-performance graphic cards and high-performance wide-screen  
projectors are released that are much better than the conventional products,  
movies manufactured by filmmakers may also be converted to contents data  
15 and transmitted on the Internet in the like manner of the Internet  
broadcasting stations, and accordingly, theaters all over the world may  
receive them on the Internet, convert them into original contents data using  
the specific execution program, and show them on the screen, thereby  
building a big theater system. Therefore, the film industry will no longer use  
20 film packs, and premium quality movies that do not deteriorate even after  
repeated use or a longer time has passed may be shown. The filmmakers  
are then not required to directly distribute the movies to the theaters through  
a complex distribution structure, and since the theaters and the filmmakers

together check movie screening numbers through computers, they may accurately and fairly share the profits.

For a further detailed description of the relay broadcasting system, the wire or wireless Internet users receive various categories of contents data from the Internet broadcasting stations A to C via the Internet or  
5 storing/recording media such as CDs or DVDs.

When the user attempts to use contents data, a specific on-line execution program that is developed and distributed by the relay broadcasting station is required, and when the user desires to use the  
10 execution program, the user needs to install it and register as a member to the relay broadcasting station on-line so as to use the same next time.

When the users execute the specific execution program, the user terminal operates as follows.

When an Internet user receives desired contents data provided by various Internet broadcasting stations all over the world from the homepage  
15 of the relay broadcasting station, and selects desired contents data from among them at the execution program, the user terminal reads a title of the selected contents data and immediately accesses the member and use information manager 982 through the web server 998 of the relay  
20 broadcasting station 980 in a wire or wireless Internet manner.

The member and use information manager 982 searches the member and use information database 985 to check whether the user is a registered member who is authorized to use the execution program or an

unregistered member, and settles the corresponding use fee. Next, the user terminal accesses the contents manager 981 to find an address of the Internet broadcasting station that provides the contents data selected by the user, and accesses the Internet broadcasting station's server to receive restoration information corresponding to the selected contents data.

When the user selects to view the contents data together with advertisements without paying the fee, the relay broadcasting station concurrently reads the user's information from the member and use information database 985 to find customized advertisements that are the most appropriate for the user from the advertisement database 986, and transmits several advertisements to the user terminal through the advertisement provider 983 either once for all (from one to ten advertisements) or slowly and with ample time while the user uses the contents.

It is desirable to check the member information and transmission speed and transmit advertisement data of small data volume to a moving wireless Internet user and transmit those of big data volume to a high-speed wire Internet user.

In this instance, the user terminals 940, 950, 960, 970, and 973 receive advertisement data, concurrently find the Internet broadcasting station, access the Internet broadcasting station once the address is found, receive supplementary data, and execute the contents data as shown in FIG. 3.

Since the commercial Internet set-top box B 976 provides high-quality images and sounds that are excellent in comparison to those provided by the general product, it is desirable to receive a use fee from the user and issue a use allowance each time.

5 It is more desirable to only receive a use fee except in advertisement viewing when doing business using the Internet set-top box A 973 in a video room or a game room.

The Internet broadcasting stations A, B, C, ... do not duplicate the titles of the contents data when producing the contents data, and they  
10 register the address of the server that stores the contents data and restoration information to the contents manager 981 of the relay broadcasting station and store the address in the contents address and restoration information address database 984.

The users are required to either pay the use fee each time the user  
15 uses the contents data, or view the advertisements of the relay broadcasting station together with the contents data when the user does not desire to pay the fee. The use fee and the advertisements are varied according to the contents data and determination of the relay broadcasting station.

The relay broadcasting station 980 stores programs for automatically  
20 and massively producing specific contents data, the specific execution program, and all kinds of information needed for opening the Internet broadcasting station according to the present invention on recording media such as CDs, and provides them to the general Internet broadcasting

stations free of charge, or provides through the Internet the above-noted specific contents-developing tool and all kinds of information required for it to general Internet broadcasting stations all over the world.

5 By cooperation with terminal makers, such as makers of various wireless Internet mobile stations, wireless Internet PDAs, and wireless Internet multimedia terminals for vehicles, the relay broadcasting station develops specific execution programs that may be installed in the above-noted makers' terminals.

10 The relay broadcasting station also develops varied versions of the specific execution program for Internet users who use general IBM or McIntosh platform computers, and distributes them to any users free of charge through the Internet broadcasting stations A, B, and C, various portal sites' shared file directories, recording media such as CDs and DVDs, or default installations in newly assembled computers of computer assembling companies.

15 The wireless Internet mobile stations or the wireless Internet multimedia terminals (a transformed PC) installed in the vehicle require RAM capacity of at least 23M to about 128M (recommended capacity) so as to access the Internet broadcasting station and fluently use various moving picture services, and they also require free data communication with general computers via cables in the like method of the wireless Internet PDAs.

20 In the case of using relatively short moving picture data such as music videos of about 3 to 5 minutes running time, as opposed to long

moving pictures such as the movies, about 32M RAM may be sufficient.

In the case of using the Internet broadcasting system through a mobile terminal, the user may freely use the service with a very low fee according to the current packet fee system.

5           When the user desires to use the contents data, it is required for the user to receive restoration information through the wireless Internet when the user has previously downloaded music videos or movie data to a general computer and stored them in the memory of a terminal such as a PDA through a data transmission cable. Accordingly, the user may use the  
10 contents data at a very low cost with a clear screen and great sound and without distortion or interruption in a fast moving train or a car, compared to the conventional streaming method wherein the terminal is continuously connected to the Internet to receive all data during the movie running time (about 90 to 120 minutes).

15           Also, even when the user directly receives the desired contents data through the mobile terminal and uses them, they may download all data within a much shorter time compared to the actual movie running time, and accordingly the present invention requires less communication time when compared to the streaming technique. When the IMT2000 service starts, the  
20 user may receive data at 2M per second when the user is stationary, and hence, when assuming that the actual data transmission speed is about 1M per second, that is, a half of the standard transmission speed of 2M, the user may download the volume of a single movie (about 90 to 120 minutes of



running time) in 3 to 7 minutes since the screen size of the moving picture data used by the wireless Internet mobile stations, PDAs, or multimedia terminals for vehicles is small and the corresponding total data capacity is also small.

5           Therefore, the users may save on communication fees by reducing communication time, and they use the terminal less frequently so that the battery installed in the terminal is used less, so the terminal may be used longer. Internet users may collect and keep desired contents data for respective categories and subjects of entertainment according to their  
10 interests, as they desire.

          As described above, in the preferred embodiment of the present invention, users may freely receive various desired contents such as movies, music videos, dramas, comics, novels, photo albums, computer games, or video games according to their interests from an Internet broadcasting  
15 station or through recording media such as CD-ROMs and DVD-ROMs distributed by the Internet broadcasting station free of charge, collect and keep them, and use them at any time.

          Since the users execute most of the contents previously downloaded, the users may execute various contents with top image and sound qualities  
20 (e.g., DVD quality) and at any time without being greatly interfered with by interruptions caused by heavy Internet traffic.

          In particular, the users may freely use the moving picture service such as for movies or music videos with good image and sound qualities in a

fast moving train, a subway, or a car, using the wireless Internet mobile station or PDA with a very much lower communication fee. The users may also receive various quality moving picture services such as famous films, music videos, dramas, plays, and sitcoms with good quality images and sound through the Internet in a fast running car on an expressway using the wireless Internet multimedia terminal installed in a car.

The contents data downloaded to the users, such as movies or novels, are executed on the specific execution program, and the users are required to initially access the Internet broadcasting station through the execution program and obtain a use allowance so as to use the contents data, and the Internet broadcasting station either receives the use fee from the user or sends customized advertisements to the user terminal for each issuing the use allowance, and accordingly, the Internet broadcasting station earns corresponding advertisement profits, completely manages and controls the users, and provides effective advertising, thereby gaining much profit from the use fees and advertisements.

Further, illegal program reproductions frequently occurring on the Internet because of charging for contents may be prevented by providing the users with a huge amount of diverse contents data including movies and computer games free of charge, allowing the users to collect and keep them according to their interests, allowing the users to freely use them when viewing the contents together with the advertisements provided at the start, the middle, and the end of the contents data, and fully satisfying the users'

possessiveness. (Some contents require the users to pay a predetermined fee.)

Since the various contents data provided by the Internet broadcasting station through a free downloading service are converted according to a specific conversion method, when reproducing them and attempting to use them, the users need to connect the user terminal to the Internet broadcasting station through the specific execution program and obtain a use allowance to use the contents data, and therefore the Internet broadcasting stations and the authors who have copyrights of various contents may provide and distribute their programs to users on the Internet, with no more fear of illegal reproduction. Rather, they may hope that Internet users all around the world reproduce their programs through legal or even unauthorized reproduction processes, collect desired ones, keep them, and use them everyday.

When using the conventional streaming method to view the moving pictures through a mobile station, it is required for the user to operate the mobile station and be connected to the wireless Internet for two hours to view a movie with a 2-hour running time, but the present invention enables the user to previously receive desired data in a shorter time frame, store the same, and then view the movie, and accordingly the user may greatly reduce the time for using the wireless Internet and the time for using a battery of the terminal, thereby allowing a longer using time than with the conventional streaming method.

If the IMT200 standard supports a data transmission speed of about 2M per second as announced, the user may store most kinds of data in the user terminal (wireless Internet mobile station or PDA) in 3 to 7 minutes after connecting to the wireless Internet.

5           Hence, even when the fee system for the Internet mobile terminal (e.g., an IMT2000 terminal) is changed to that of the general mobile terminal, the use fee is greatly reduced, and further, the user may use the contents only if the user receives restoration information and supplements it when the user has previously received most of the contents data, and accordingly, the  
10           user may use high-quality moving picture services in a fast moving train or a subway as desired.

          While this invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood that the invention is not limited to the disclosed  
15           embodiments, but, on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

**WHAT IS CLAIMED IS:**

1. A network-broadcasting contents consignment sale system connected to authors for receiving a plurality of authored pieces, and providing the authored pieces to user terminals, comprising:

5           a contents data management server for converting a contents data structure of the authored pieces into a predetermined format, transmitting converted data to the user terminal, and generating restoration information for restoring the converted data structure;

10           a data storage unit for storing restoration information for restoring the converted contents data; and

15           a free-of-charge contents provider for providing the converted contents data to the user terminal through a network or a free-of-charge distributor, and wherein the contents data management server transmits the restoration information stored in the data storage unit to the user terminal when the user terminal accesses the contents data management server so that the contents data stored in the user terminal are restored to original contents data and are executed.

20           2. The system of claim 1, wherein the restoration information is temporarily provided on the network, and the restoration information is established to be temporarily stored in a memory or a storage device of the user terminal to perform predetermined tasks, and then be immediately and automatically deleted from the memory including a RAM or the storage device including a HDD.

3. The system of claim 1, wherein the contents data management server comprises:

an important data manager for separating a portion of data from the contents data;

5 a contents data converter for dividing the contents data into a plurality of portions, and arranging the portions in a predetermined order different from the original order to convert the data structure;

an editing code manager for generating editing codes including information for restoring the contents data structure that is arranged by the contents data converter in the order different from the original order back into  
10 the contents data structure of the original order;

a numerical value manager for converting predetermined data values of the contents data; and

a contents introducer for introducing the contents, and providing  
15 restoration information matched with the contents data.

4. The system of claim 1, wherein the data storage unit comprises:

an important data database for storing the portion of the contents data separated by the important data manager;

an editing code database for storing the editing codes;

20 a numerical value database for storing the numerical values'

a contents data database for storing the converted contents data;

and

a contents database for storing documents for introducing the

contents data and restoration information matched with the contents data.

5           5. The system of claim 1, wherein the contents data provided to the user terminal comprise: picture products for television broadcasting including movies, dramas, situation comedies, plays, music videos, and shows; audio products for radio broadcasting including instrumental performances, songs, narrated fairy tales, jokes, and gags; publications including novels, comics, children's picture stories, photos and picture books, technical books, ordinary books, engineering books, and drafts; and computer and video games for use with the user terminal.

10           6. In a network-broadcasting contents consignment sale system for transmitting a plurality of contents data to a user terminal connected on the network, recording the contents data on recording media including CD-ROMs or DVD-ROMs, distributing the contents data free of charge, and controlling users' using the contents data to obtain predetermined use fees from the users, a network-broadcasting contents consignment sale method, comprising:

                  converting the contents data's structure, separately generating restoration information, and storing the restoration information for executing the converted contents data;

20           transmitting the contents data having the converted data structure to the user terminal via the network or recording the contents data on various recording media including CD-ROMs or DVD-ROMs and distributing them to the user free of charge, when a transmission request on the contents data is

input from the user terminal; and

transmitting, when a use allowance request for the contents data is input from the user terminal, and the use fee of the contents data is settled or the user is found to previously have paid a predetermined membership fee, restoration information that corresponds to the contents data on which the user allowance request is input, to the user terminal.

7. The method of claim 6, further comprising: transmitting advertisement data and the restoration information to the user terminal, and operating the user terminal to execute the contents and the advertisements, when the user selects to view the contents and the advertisements without paying the use fee of the contents data.

8. The method of claim 6, wherein the method for converting the moving picture contents data comprises:

dividing the moving picture data into a plurality of portions;  
arranging the separated data in a predetermined order that is different from the original order to generate converted contents data;  
generating an editing code including information for converting the differently arranged order into the original order; and  
separating a predetermined portion from the converted contents data to generate important data.

9. The method of claim 6, wherein the method for converting the moving picture contents data comprises separating a predetermined portion from the moving picture data to generate important data, and generating the



remained portion as the converted contents data.

10. The method of claim 6, wherein the method for converting the moving picture contents data comprises:

dividing the moving picture data into a plurality of portions;

5 arranging the separated data in a predetermined order that is different from the original order to generate converted contents data; and

generating an editing code including information for converting the differently arranged order into the original order.

11. The method of claim 6, wherein the method for converting the program contents data comprises:

10 separating a portion from the program to generate important data that are an essential portion of the program for executing personal task programs, business programs, and computer and video game programs; and

15 substituting other numerical values for predetermined data values of the program to generate converted contents data, and generating numerical values for converting the substituted values into original numerical values.

12. The method of claim 6, wherein the method for converting the program contents data comprises:

20 separating a portion from the program to generate important data that are an essential portion of the program for executing personal task programs, business programs, and computer and video game programs; and generating the remaining portion of the program as the converted

contents data.

13. The method of claim 6, wherein the method for converting the program contents data comprises:

5 converting predetermined data of the personal task programs, business programs, and computer and video game programs into converted contents data, and generating numerical values for converting the converted numerical values into the original numerical values.

14. The method of one of claims 8 through 10, wherein a data file format of the converted contents data is converted again to generate an independent format.

15 15. The method of one of claims 8 through 13, wherein, in the case of dividing the contents into a plurality of portions, a number of divisions of the contents, intervals of the divided contents, a data volume of the separated important data, a number of the important data, a number of the numerical values, and respective data values are differently established for each contents data without a predetermined rule.

20 16. In a network-broadcasting contents consignment sale system connected to a plurality of authors, for receiving a plurality of authored pieces, and providing the authored pieces to user terminals, a contents sale system of relay broadcasting or network broadcasting, comprising:

a contents data management server for converting a data structure of the authored pieces into predetermined data to transmit the converted data to the user terminal, and generating restoration information for restoring

the structure of the converted contents data into a structure of before conversion;

a data storage unit for storing restoration information for restoring the structure of the converted contents data, and restoration information that corresponds to the contents data provided by a contents provider to the users;

a free-of-charge contents provider for providing the converted contents data to the user terminal through the network or a free-of-charge distributor; and

a contents provider system for generating restoration information, storing the restoration information in the data storage unit, and providing the converted contents data that correspond to the restoration information to the user terminal through the network or a free-of-charge distributor.

17. The system of claim 16, wherein the contents provider system comprises:

a contents data manager for converting the data structure of the authored pieces, and transmitting the converted contents data to the user terminal;

a contents database for storing the converted contents data; and

a use fee and advertisement profit manager for managing how much profit the contents provider gains.

18. The system of claim 16, wherein the network-broadcasting contents sale system and the contents provider comprise a CD/DVD

producer for storing contents data on various recording media.

5 19. A network-broadcasting contents consignment sale method for unifying a plurality of network broadcasting stations into a single body, applying the network broadcasting stations to a contents data management server and a data storage unit for producing contents data, storing the contents data, and transmitting the same to user terminals, wherein a relay  
10 broadcasting station comprises a contents introducer and a contents database for storing the contents data provided by the network broadcasting stations, and the relay broadcasting station receives membership entrance from the users, performs membership and use management, receives  
15 predetermined membership fees or use fees from the users to issue use allowances on various contents to the users so that the users may receive the contents data and corresponding restoration information from the network broadcasting stations through the relay broadcasting station (or its homepage) and use them.

20 20. The method of claim 19, wherein: a user registers for membership entrance to the relay broadcasting station so as to use and install a specific execution program; when the user operates the specific execution program a user terminal initially accesses the relay broadcasting station on the network to check whether the user is a registered member who has previously paid the membership fee; the user terminal receives a use allowance on the specific execution program to allow the user who is a registered member to access the network broadcasting station; the relay

broadcasting station manages membership of the users who use the specific execution program; and the relay broadcasting station each month receives a predetermined amount of money from the network broadcasting stations as broadcasting technical commissions, receives a predetermined amount of use fees from the users (members) each month to issue program use allowances on the network, or receives broadcasting technical commissions and program use fees from the network broadcasting stations and the users.

21. The method of claim 19, wherein when the relay broadcasting station, the network-broadcasting contents consignment sale system, the contents provider, and the network broadcasting stations perform charged contents business, the users are allowed to reproduce desired contents so that the users may reproduce the contents data by freely transmitting and receiving the contents data on the network and reproduce them through various recording media including CDs, DVDs, and storage devices to share them with each other, and accordingly, the users are allowed to freely collect and keep their desired contents data according to their interests and tendencies, and the users are allowed to receive a use allowance on the network each time the users use the contents so that the users may view the contents by paying a predetermined use fee or a membership fee or they may view the contents together with advertisements.

22. A network-broadcasting contents consignment sale method for transmitting a plurality of contents data to user terminals connected on a network, recording the contents data on recording media to distribute them

free of charge, issuing a use allowance when a user uses the contents data through a wireless network, and receiving a predetermined use fee or a membership fee, comprising:

5           converting the structure of the contents data, and separating, generating, and storing restoration information for executing the converted contents data;

          transmitting the contents data having the converted data structure to the user terminal through the network, or recording the contents data on various recording media and distributing them to the users free of charge, 10 when a transmission request on the converted contents data is input from the user terminal;

          receiving the contents data at the user terminal through the network or the recording media, and transmitting the contents data to a mobile station by connecting a data transmission cable or through various 15 data transmitters; and

          transmitting restoration information that corresponds to the contents data to which the use allowance request is input to the mobile station to execute the contents data at the mobile station, when a use allowance request on the contents data is input from the mobile station.

20           23. A network-broadcasting contents consignment sale method comprising:

          converting various contents produced by service providers including network broadcasting stations, video and computer game service

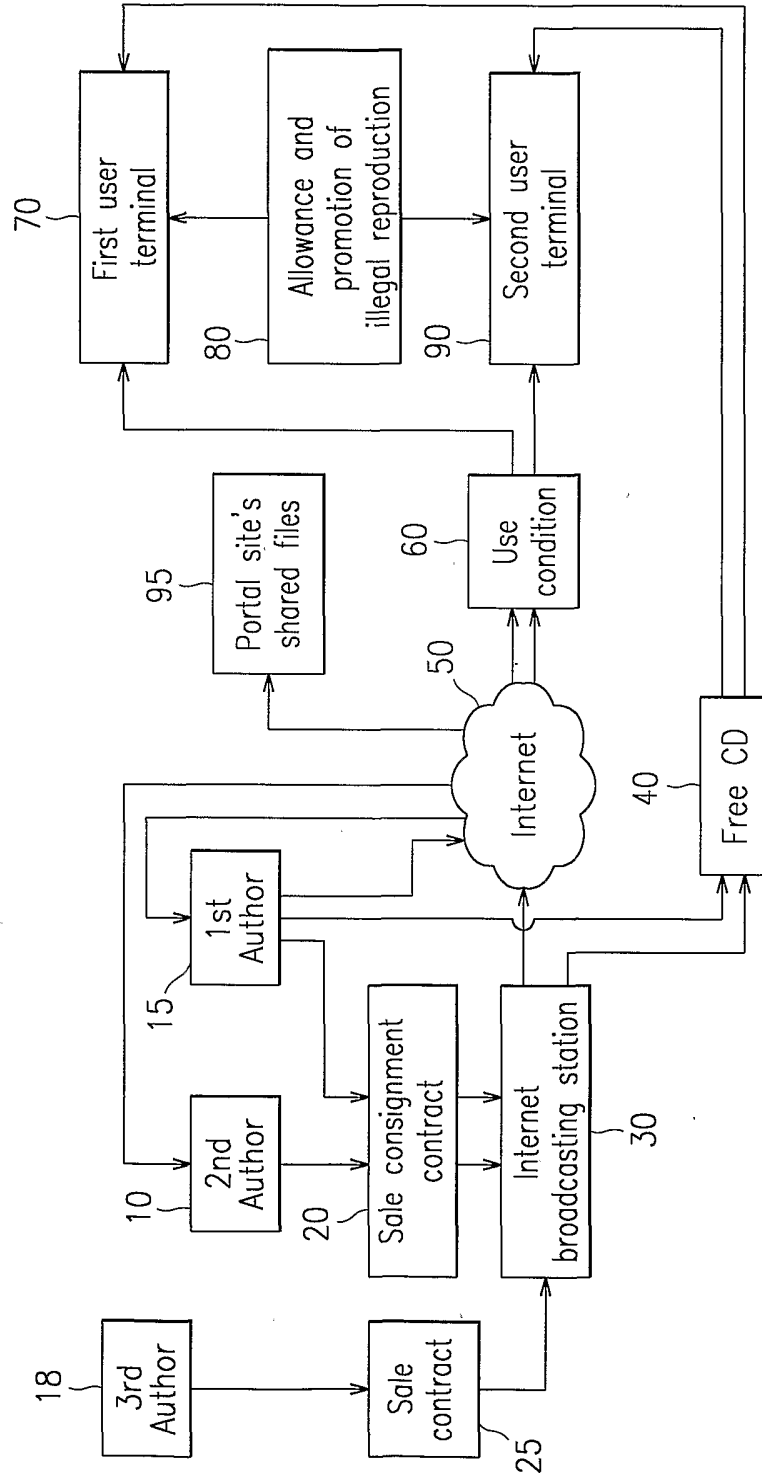
providers, and filmmakers into contents data and restoration information, and storing them in a data storage unit;

reading the data storage unit and transmitting the converted contents data to a network set-top box through the network when the network set-top box accesses a contents data management server of the service providers and requests the converted contents data;

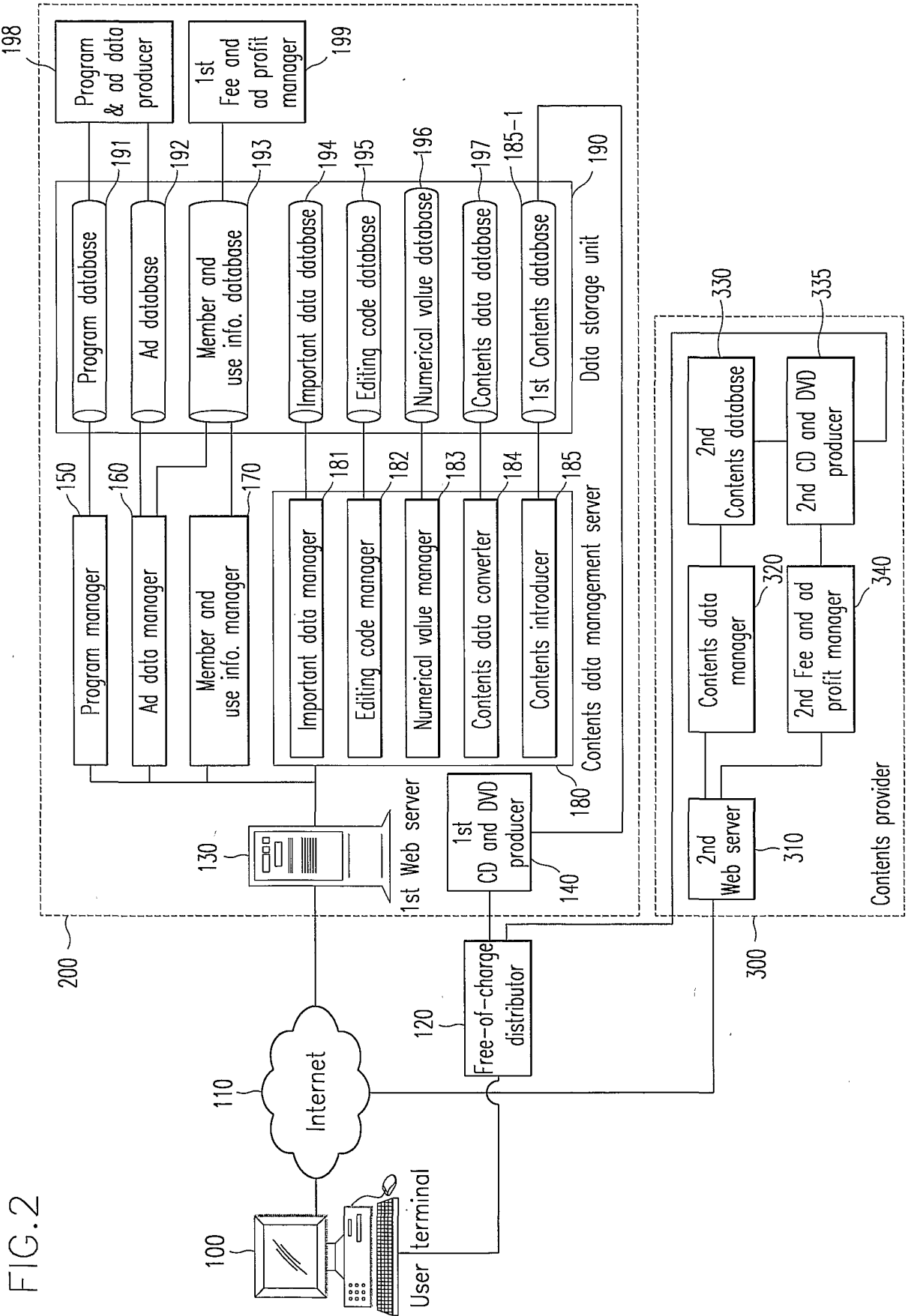
transmitting the restoration information to the network set-top box to execute the converted contents data at the network set-top box when the network set-top box accesses the contents data management server so as to execute, in a presentation place (including a home, a theater, a video room, a computer room, a game room, an office, and a public place), the converted contents data transmitted to the network set-top box; and

the service providers checking the contents data executed at the network set-top box to receive from the presentation place predetermined use fees according to categories and number of executions of the contents.

FIG. 1







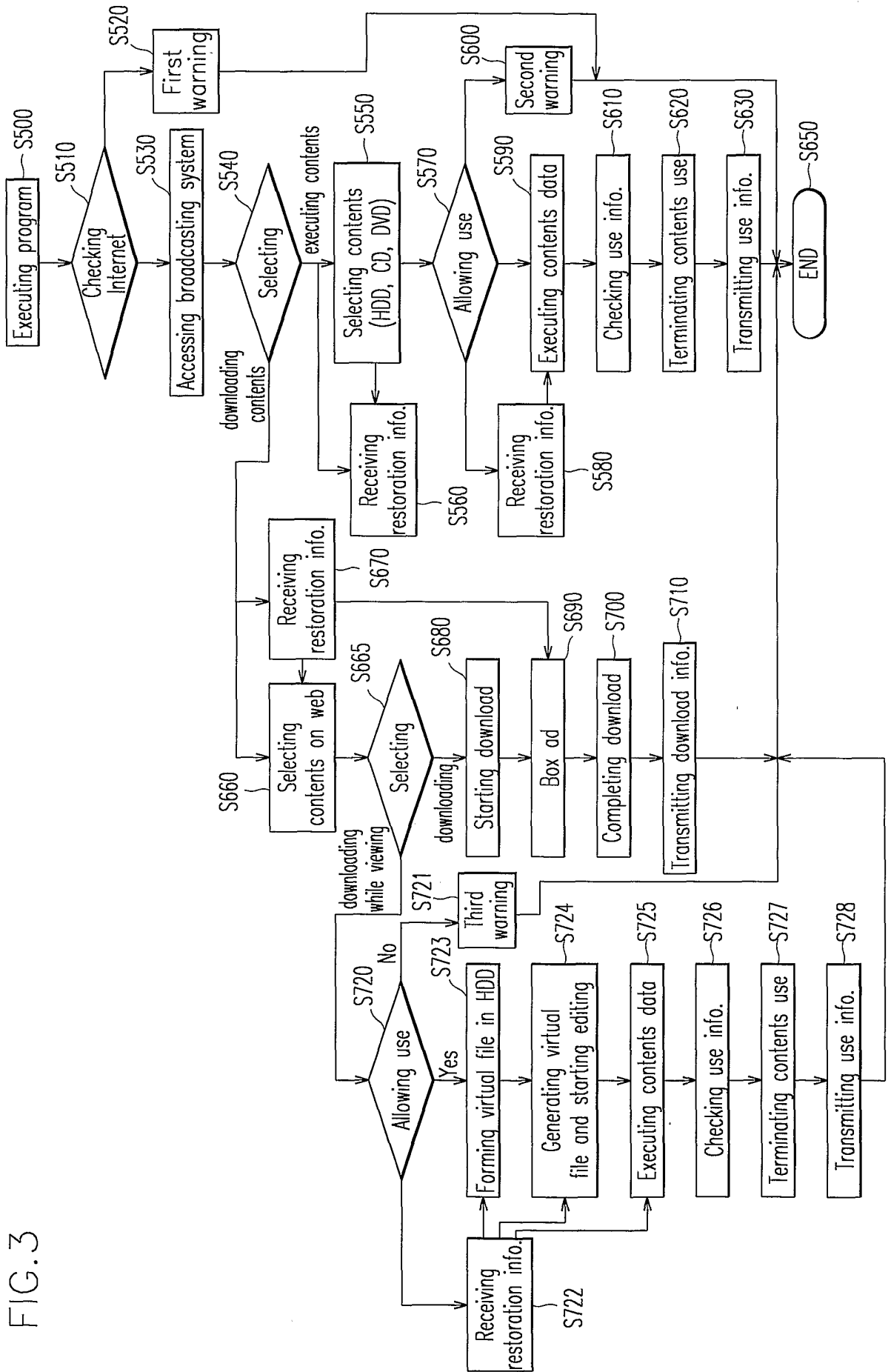


FIG. 3

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FIG.4

Editing code
Numerical value
Contents data
Important data
Ad data

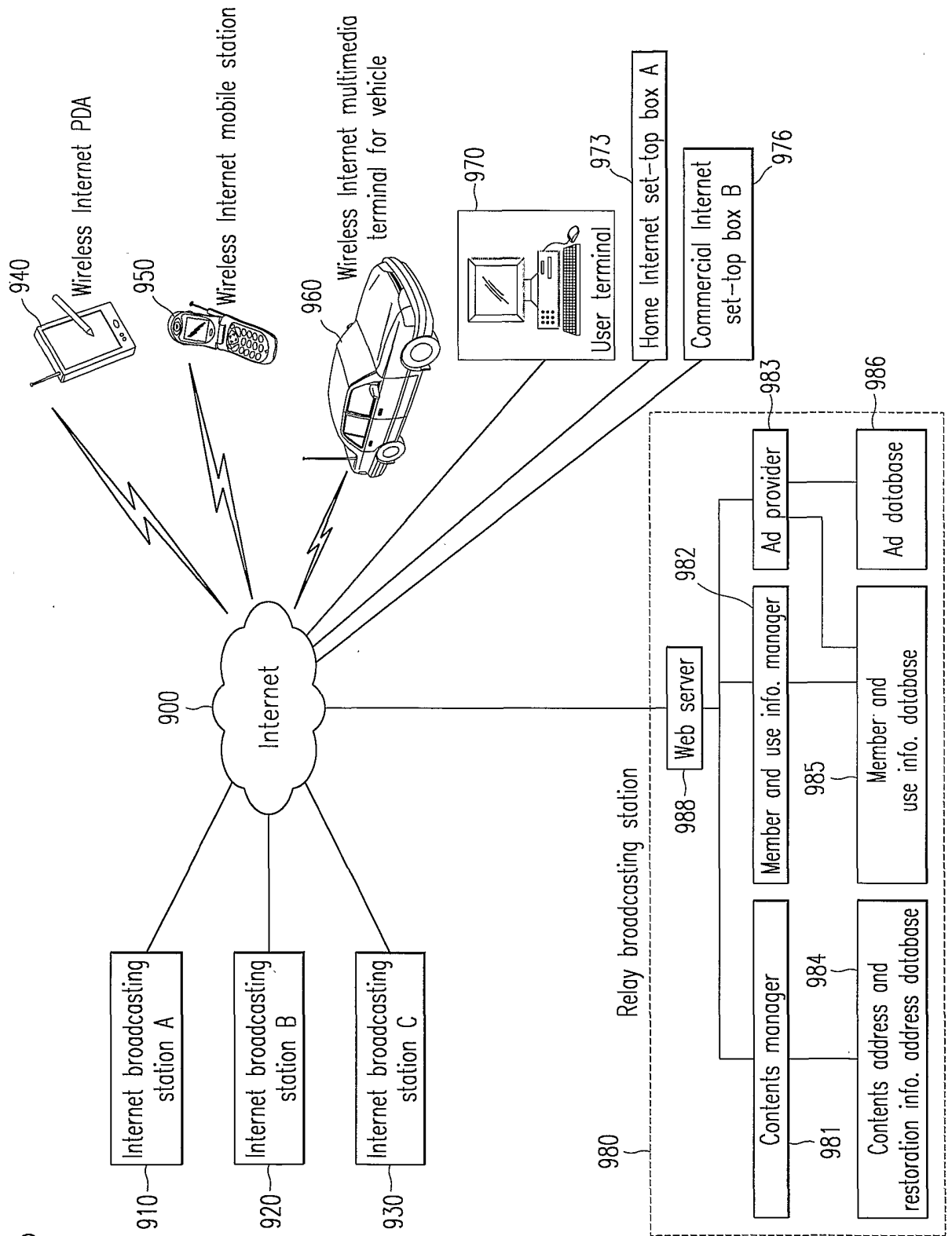


FIG.5

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 02/01099

## CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: G06F 17/60

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<sup>7</sup>: G06F, H04N, G05B

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

wpi paj epodoc

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2000 113048 A (HITACHI) 21 April 2000 (21.04.00) <i>abstract.</i>	1-23
A	US 5040062 A (SAFRANEK et al.) 13 August 1991 (13.08.91) <i>the whole document.</i>	1-23
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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

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

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„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

„&amp;“ document member of the same patent family

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16 July 2002 (16.07.2002)

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR 02/01099-0

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JP	A2	00113048	21-04-2000	none			
US	A	5040062	13-08-1991	JP	A2	8172625	02-07-1996
				JP	B2	2665068	22-10-1997