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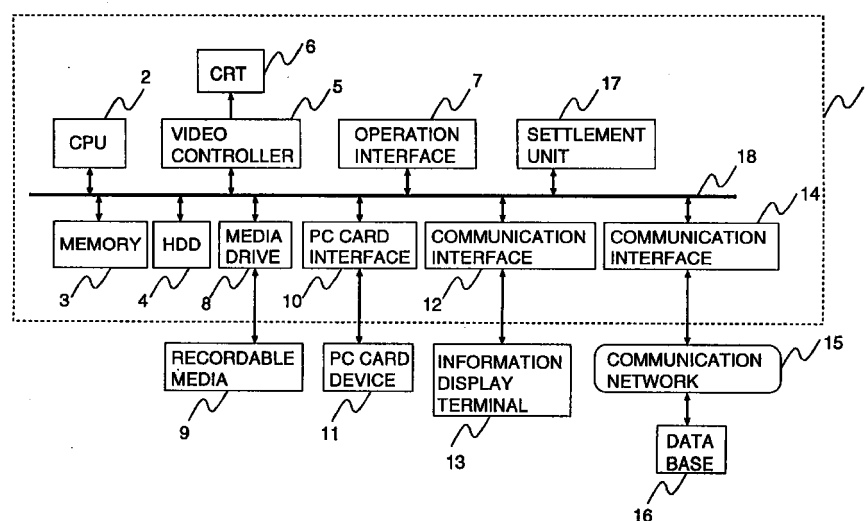
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(54) **Method and apparatus for selling electronic information with or without advertisement**

(57) An apparatus (1) for selling electronic information required by a user by writing the information to a mechanically readable and writable recording medium (9, 11) includes an operation panel (7) allowing the user to determine which electronic information is to be used and to select whether advertising information is to be included in the electronic information determined by the user, and a CPU (2) for selectively executing an opera-

tion of writing the electronic information with advertising information incorporated to recording medium (9, 11) when the user selected to include advertising information, or an operation of writing electronic information only to the recording medium (9, 11) when the user selected not to include the advertising information.

FIG. 1



Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to an apparatus for selling electronic information and, more specifically, to an apparatus for selling electronic information together with advertisement information, as well as to the method thereof.

Description of the Background Art

[0002] Recently, along with the development in hardware and software, attempts have been made to provide contents of existing publications such as comics and novels in the form of electronic data and to enable reading or subscription of the contents of the comics or novels selected by a user on a PC (Personal Computer) or a PDA (Personal Digital Assistant). Such electronic publications are distributed to vending machines installed in homes, kiosks, convenience stores or on the street and sold, through wired or wireless communication networks including the Internet or satellite broadcast. Such commercial transaction of electronic data is advantageous in that unnecessary inventory can be eliminated, and that the delivery and the overall cost can be reduced.

[0003] An automatic information vending machine disclosed in Japanese Patent Laying-Open No. 6-12571 includes: an auxiliary memory storing demonstration information and message information of the information data to be sold; an output unit displaying prescribed operation message in accordance with an external operation signal such as a selection operation and payment operation; a communication unit for obtaining information data to be sold from an external data base; a read and write unit detecting external insertion of memory and transferring thereto information data from the communication unit; and a control circuit reading and displaying the demonstration data and the message information from the auxiliary memory and when information data to be sold is selected by an external operation signal, detecting remaining capacity of the inserted memory and if it is determined that transfer of the information data is possible, transferring the information data to the inserted memory through a communication network.

[0004] According to the automatic information vending machine described in Japanese Patent Laying-Open No. 6-12571, when a person comes near to the vending machine, a demonstration is given, introducing product and sales information. The user selects information data, pays, designates the type of the storage medium, and sets the storage medium in the read and write unit in accordance with an operation procedure. The information data is read from the external data base

through the communication network and transferred to the set storage medium, and thus the information is sold.

[0005] An electronic press information distribution system in which electronic press information is edited and distributed to be used by a consumer at an automatic vending machine of electronic information, disclosed in Japanese Patent Laying-Open No. 9-23243, includes a unit for converting press information prepared by a publisher to electronic press information of a prescribed format, a storing unit for receiving and storing the electronic press information, a unit for classifying press information in accordance with localities and adding identification code on the basis of each piece of press information, and a unit for transmitting the electronic press information classified for local areas to a plurality of automatic vending machines.

[0006] In the electronic press information distribution system described in Japanese Patent Laying-Open No. 9-23243, a distribution center classifies press information in accordance with localities of the information, and adds a code for identifying local area to the press information. The press information is classified area by area, and the information is transmitted to automatic vending machines provided in respective areas. Thus, it is possible to sell electronic press of which contents differ area by area.

[0007] For the sales of electronic publication as described above, it is of high interest for the publisher of the electronic publication or for those who installing the automatic vending machines of the electronic publication that the electronic publication is sold together with advertisement.

[0008] In the conventional vending machine for selling electronic information, however, the electronic information and the advertising information have been handled in most cases as packaged information. In a few cases where the advertisement is separated, the advertisement is at most merely classified area by area. Even in that case, the advertising contents for one area are fixed and not variable.

[0009] Consider application of such advertising information to electronic publication. There would be no major problem when the electronic publication information and the advertising information are sold packaged with each other if the electronic publication information corresponds to a weekly magazine, for example, which is consumed in a short span. On the other hand, if the electronic publication information corresponds to a literally work circulated over a long period of time, the value of the advertising information sold together with the literally work would decline or would be utterly meaningless.

[0010] As there are various users having various interest, some users may require advertising information of some field of interest, while other users would not want any advertising information. At present, however, it is impossible for the user to select the advertising infor-

mation.

SUMMARY OF THE INVENTION

[0011] An object of the present invention is to provide method and apparatus of selling electronic information, which allows, when a user buys required electronic information, the user to select whether advertising information should be included or not.

[0012] Another object of the present invention is to provide method and apparatus of selling electronic information which allows, when a user buys required electronic information, the user to select whether advertising information is to be included or not, and in which the sales price is adjustable accordingly.

[0013] A still further object of the present invention is to provide method and apparatus of selling electronic information which allows, when a user buys required electronic information, the user to select whether advertising information is to be included or not and which allows adjustment of contents of the electronic information accordingly.

[0014] A still further object of the present invention is to provide method and apparatus of selling electronic information which allows, when a user buys required electronic information, the user to select whether advertising information is to be included or not, and which allows adjustment of contents of the advertising information accordingly.

[0015] A still further object of the present invention is to provide method and apparatus of selling electronic information which allows, when a user buys required electronic information, the user to select whether advertising information is to be included or not, and which displays advertisement accordingly.

[0016] The apparatus in accordance with the present invention is for selling electronic information required by a user by writing the information to a machine-readable and writable recording medium, including: a first operation panel used by the user for determining which electronic information is to be utilized; a second operation panel used by the user for selecting whether advertising information is to be included in the electronic information determined by the user; and a first control circuit selectively executing an operation of writing the electronic information with advertising information incorporated to the recording medium when the user selected to include the advertising information, or an operation of writing only the electronic information to the recording medium when the user selected not to include the advertising information.

[0017] According to the present invention, it is possible for the user to select whether the advertising information should be included or not in the electronic information to be used, by using the second operation panel. Therefore, the user can buy the electronic information after making a selection as to whether the advertising information should be included in the electronic

information or not.

[0018] The method in accordance with another aspect of the present invention is for selling electronic information required by a user, by writing the information to a machine-readable and writable recording medium, including: the step of user's selection of which electronic information is to be utilized; the step of user's selection as to whether advertising information is to be included in the determined electronic information or not; and the first control step of selectively executing an operation of writing the electronic information with the advertising information incorporated to the recording medium when the user selected to include the advertising information, or an operation of writing only the electronic information to the recording medium when the user selected not to include the advertising information.

[0019] According to the present invention, it is possible for the user to select whether the advertising information should be included in the electronic information to be used or not. Therefore, the user can buy the electronic information after selecting whether the electronic advertising information should be included in the electronic information or not.

[0020] The foregoing and other objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of the present invention when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021]

Fig. 1 is a block diagram of the apparatus for selling electronic information in accordance with an embodiment.

Fig. 2A is a schematic illustration representing the state of data storage of electronic information in accordance with an embodiment.

Fig. 2B is a schematic illustration representing the state of data storage of advertising information in accordance with an embodiment.

Fig. 2C is a schematic illustration representing the state of data storage of determining information in accordance with an embodiment.

Fig. 3 is a flow chart of operation in accordance with a first embodiment.

Fig. 4 is a flow chart of operation in accordance with a second embodiment.

Fig. 5A represents a state before replacing and inserting advertising information in the second embodiment.

Fig. 5B is an illustration representing a state after the advertising information is replaced and inserted in accordance with the second embodiment.

Fig. 6 is a flow chart of operation in accordance with a third embodiment.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

First Embodiment

[0022] Referring to Fig. 1, the apparatus 1 for automatically selling electronic information in accordance with an embodiment of the present invention includes, all connected through a bus line 18, a CPU (Central Processing Unit) 2 for controlling the overall apparatus 1, a memory 3 for storing a program to be executed by the CPU 2 and various data, an HDD (Hard Disk Drive) 4 for storing various data, a video controller 5 for controlling a display unit, an operation interface 7 allowing the user to select and determine items to be selected, a media drive 8 for writing data to a machine-readable and writable recording medium, a PC card interface 10 for writing data to a PC card, a communication interface 12 for communication with user's information display terminal, a communication interface 14 for receiving distribution of various data from an external data base, and a settlement unit 17 for receiving payment for the sales of the electronic information.

[0023] CPU 2 is formed of a microprocessor, for example, and controls the overall apparatus 1 by executing a program on memory 3 or HDD 4. Memory 3 is formed of an RAM (Random Access Memory) or an ROM (Read Only Memory) and used for storing programs and various data. HDD 4 as information storage unit stores contents information, advertising information, programs and various data.

[0024] Referring to Fig. 2A, in a data storage area of the electronic information (electronic publication in the present embodiment), contents of the electronic publication are stored in the form of electronic data, classified category by category in accordance with the contents of the publication. The category may include cooking, travel and so on. Further, electronic publication include ones (electronic publications 1, 4) distributed with advertising information incorporated, and ones (electronic publications 2, 3) distributed without advertising information incorporated.

[0025] Referring to Fig. 2B, in the data storage area of advertising information, at least one piece of advertising information is stored, which includes the advertising information itself and additional information associated with the advertising information itself, indicative of the type of the advertisement. The additional information includes available period, local area specifying information, advertiser information and category information of the electronic publication related to the advertisement.

[0026] Referring to Fig. 2C, in the data storage area of the determining information, data of operation date of the apparatus, data of the place where the apparatus is installed, weather data when the apparatus is operated, and user data are stored determining information data.

[0027] CPU 2 is capable of reading contents of the electronic publication stored in the data storage area for

the electronic publication. CPU 2 transmits the read contents of the electronic publication to media drive 8, PC card interface 10 and communication interface 12 through bus line 18. At this time, when the advertising information is incorporated in the electronic publication, CPU 2 may newly delete the advertising information, and when the advertising information is not incorporated in the electronic publication, CPU 2 may newly add advertising information, by a method as will be described later.

[0028] CPU 2 is capable of directly reading additional information of the advertising information stored in the advertising data storing area and the additional information of the advertising information stored in the data area for the electronic publication. Based on the additional information and various data stored in the determining data storage area, CPU 2 searches and retrieves advertising information to be incorporated. CPU 2 also replaces advertising information which has been incorporated in the electronic publication with other advertising information stored in HDD 4, or adds advertising information stored in HDD 4 to the electronic publication.

[0029] Video controller 5 controls a CRT (Cathode Ray Tube) 6, so as to provide display of operation procedure or details of operation on CRT 6. The display device is not limited to a CRT, and an LCD (Liquid Crystal Display) or the like may be used. Operation interface 7 is a keyboard or a touch panel, for example, allowing the user to operate the apparatus 1. The operation interface 7 may be provided integrated with CRT 6.

[0030] Media drive 8 writes data to recording medium 9. The recording medium 9 may include an FD (Floppy Disk), an MO (Magneto Optic) and an MD (Mini Disk). PC card interface 10 writes data to a PC card 11 functioning as a recording medium.

[0031] Communication interface 12 communicates with information display terminal 13 of a user, by which the user views the information such as the electronic publication he or she bought. Communication utilizing infrared ray, USB (Universal Serial Bus) or RS-232C, for example, may be applicable. Alternatively, the information such as the electronic publication may be directly displayed on the information display terminal 13 without using any recording medium. CRT 6 may be used as information display terminal 13.

[0032] Media drive 8, PC card interface 10 and communication interface 12 provide as outputs the contents information and the advertising information sold to the user by the apparatus 1. These components are used appropriately dependent on the type of the destination of output (that is, whether the output is provided to a recording medium, a PC card or to the information display terminal).

[0033] Communication interface 14 is for interfacing transmission/reception with a satellite or with a communication network 15 such as Ethernet or ISDN. In accordance with the operation of operation interface 7,

the electronic publication information and the advertising information are down-loaded from an external data base 16 connected to communication network 15 to various media, or temporary to HDD 4. The interface is also used for transmitting and receiving management information such as settlement information, user information and the state of accessing, between the apparatus 1 and an external management server.

[0034] The settlement unit 17 is implemented as a unit for reading and writing a prepaid card, a unit for reading a credit card or a cash counter. Settlement unit 17 receives payment of the price of the sold contents information. More specifically, settlement unit 17 detects payment of a prescribed amount and give a notice of the result to CPU 2. CPU 2 permits sales of electronic publication information and advertising information accordingly.

[0035] Referring to Fig. 3, the operation of apparatus 1 will be described. First, the user operates the operation interface 7 and selects electronic information (S1). In the present embodiment, the electronic information represents electronic publication. The electronic information, however, may be any works including movies and music. Thereafter, the user selects whether advertisement should be included or not by operating operation interface 7 (S2).

[0036] When the user selects electronic publication with advertisement, the electronic publication is sold for one dollar, for example (S3), and the electronic publication with advertisement is written to the medium (S4). When the user selects electronic publication without advertisement, the publication is sold for two dollars, for example (S5), and the electronic publication without advertisement is written to the medium (S6). As the electronic publication with advertisement is sold for a lower price than without advertisement, sales of electronic publication and advertisement can be attained in effective and efficient manner.

[0037] The electronic publication with and without advertisement may be sold for the same price or, alternatively, the electronic publication with advertisement may be sold at a higher price.

[0038] Further, when electronic publications with and without advertisement are to be sold for the same price, the electronic publication without advertisement may be limited in contents than the publication with the advertisement, or the electronic publications with and without advertisement may have different contents. For example, the electronic publication with advertisement may have the whole contents, while the electronic publication without advertisement may contain only the index and summary.

Second Embodiment

[0039] Hardware configuration of the apparatus for automatically selling electronic information in accordance with the present embodiment is the same as that

shown in Fig. 1. Therefore, description thereof is not repeated here.

[0040] The operation of the apparatus in accordance with the present embodiment will be described with reference to Fig. 4. First, the user operates operation interface 7 and selects contents to buy (S21). CPU 2 of apparatus 1 replaces (S22) and adds (S23) the advertising information. Though the process of replacement and the process of adding advertising information are shown as performed successively in Fig. 4, only one of these processes may be performed. Thereafter, the process for settlement is performed (S24), and the electronic publication is written to the medium (S25).

[0041] The process of replacement and the process of adding advertising information of steps S22 and S23 will be described with reference to Figs. 5A and 5B. Advertising information A of distributed electronic publication shown in Fig. 5A is replaced by advertising information A' as shown in Fig. 5B. This process takes place when available period of advertising information A has been expired, for example. Further, referring to Fig. 5B, advertising information B is inserted between pages. Further, advertising information C is inserted to a page. When an advertisement is inserted between pages, the page numbers following the inserted advertisement are shifted. Therefore, the pages should be re-numbered. The advertising information for replacement or to be added may be newly distributed, or may be stored in advance in HDD 4 by a manager of the apparatus 1.

[0042] In the present embodiment, the advertising information to be subjected to the replacement process or the addition process includes additional information, and the process of replacement or addition is selectively performed based on the additional information. The additional information may be automatically read by the CPU 2 to be processed. Alternatively, a corresponding item may be selected by operation interface 7 to perform similar process. Examples of the additional information are as follows.

[0043] Additional information defining available period of advertisement: when this additional information is utilized, it is possible to update the advertising information constantly to the latest one by checking the time of operation, and hence it is possible for the user to obtain the latest advertising information when he or she buys the contents.

[0044] Additional information identifying area of where the apparatus is installed; when this additional information is utilized, advertising information of areas not related to the user can be dispensed with, and additionally, it becomes possible for the advertiser to provide effective advertisement in limited areas.

[0045] Additional information for identifying whether the advertisement is for the particular store where the apparatus is installed; when this additional information is utilized, it becomes possible to provide advertisement of the store itself where the apparatus is installed to the user. In this case, it is desirable that the installer of the

apparatus may arbitrarily set the additional information in the HDD 4 storing the contents of advertisement and the additional information.

[0046] Additional information identifying weather: by utilizing this additional information, it is possible to provide information in accordance with the weather when the apparatus is operated. For example, on a clear day, advertising information for outdoor activity may be provided and when it rains, advertising information of indoor activity may be provided to higher effects. The weather information when the apparatus is operated may be input by the user, or may be distributed.

[0047] Additional information identifying time: by utilizing this additional information, information appropriate for the time of operation can be provided. For example, advertising information of lunch may be provided around noon, and advertising information of dinner may be provided in the evening to higher effects.

[0048] Additional information identifying preference of various users: by utilizing this additional information, it is possible to provide advertising information of sports, advertising information of theater and the like in accordance with the preference of the user, to higher effect.

[0049] Additional information identifying category of the electronic publication selected by user's operation: by utilizing this additional information, it is possible to provide advertising information related to the electronic publication selected by the user, to higher effect. For example, when a cook book is selected, advertising information related to cooking may be provided, and when a travel book is selected, advertising information related to travel may be provided. Thus advertising information matching the user's preference can be provided. In this case, it is necessary that the electronic publications are classified into categories in advance, as shown in Fig. 2A.

Third Embodiment

[0050] The hardware configuration of the apparatus for automatically selling electronic information in accordance with the present embodiment is the same as that of Fig. 1. Therefore, description thereof is not repeated.

[0051] The operation of the apparatus 1 will be described with reference to Fig. 6. First, the user selects the electronic publication to buy by operating operation interface 7 (S1). CPU 2 calculates settlement (S3). CPU 2 displays advertising information on CRT 6 (S34) while the electronic publication is being written to a medium (S4).

[0052] The advertising information to be displayed is the advertising information added to the electronic publication written to the medium. The advertising information may be displayed on CRT 6 when the user selects electronic publications on operation interface 7, other than the time of waiting for the writing of information to the medium. In this manner, the advertising infor-

mation is displayed when the user selects the electronic publication and the advertising information is again displayed on the PDA or the like so as to be viewed by the user, and the effect of advertisement is enhanced.

[0053] The processes in the embodiments described above are executed by a program. The program as a whole or parts of the program may be stored in advance in a computer readable recording medium such as a floppy disk or a hard disk through a communication network or directly, and the program may be installed in apparatus 1 as necessary to be executed.

[0054] Although the present invention has been described and illustrated in detail, it is clearly understood that the same is by way of illustration and example only and is not to be taken by way of limitation, the spirit and scope of the present invention being limited only by the terms of the appended claims.

Claims

1. An apparatus for selling electronic information required by a user by writing the information to a mechanically readable and writable recording medium, comprising:

a first operation panel used by the user for determining which electronic information is to be utilized;

a second operation panel used by the user for selecting whether advertising information is to be included in said determined electronic information; and

a first control circuit connected to said first and second operation panels for selectively executing an operation of writing said electronic information with said advertising information incorporated to said recording medium when the user selected to include said advertising information, or an operation of writing said electronic information only to said recording medium when the user selected not to include said advertising information.

2. The apparatus according to claim 1, further comprising a price calculating circuit for charging different price of sales dependent on whether said advertising information is included or not.

3. The apparatus according to claim 1, further comprising a second control circuit for writing, when the user selected not to include said advertising information, either a part of said electronic information determined by the user or information different from said electronic information determined by the user, to said recording medium.

4. The apparatus according to claim 1, wherein said advertising information includes advertising infor-

mation and additional information representative of a search key of said advertising information;

said apparatus further comprising
a first searching circuit for searching which
advertising information is to be incorporated in
said electronic information determined by the
user. 5

5. The apparatus according to claim 1, wherein 10

said electronic information is classified into a plurality of categories in accordance with contents of the information;
said advertising information includes advertising information and category information corresponding to the categories of said electronic information;
said apparatus further comprising a second searching circuit for searching which advertising information is to be incorporated in said electronic information determined by the user, based on the category of said electronic information determined by the user. 15 20

6. The apparatus according to claim 1, further comprising a display monitor for displaying, when the user selected to include said advertising information, said advertising information. 25

7. An apparatus for selling electronic information required by a user by writing the information to a computer readable and writable recording medium, comprising: 30

means used by the user for determining which electronic information is to be utilized;
means used by the user for selecting whether advertising information is to be included in said electronic information determined by the user; and
first control means connected to said determining means and said selecting means, for selectively executing an operation of writing said electronic information with said advertising information incorporated to said recording medium when the user selected to include said advertising information, or an operation of writing said electronic information only to said recording medium when the user selected not to include said advertising information. 35 40 45 50

8. The apparatus according to claim 7, further comprising means for charging different prices of sales dependent on whether said advertising information is included or not. 55

9. The apparatus according to claim 7, further com-

prising second control means for writing, when the user selected not to include said advertising information, either a part of said electronic information determined by the user or information different from said electronic information determined by the user.

10. The apparatus according to claim 7, wherein said advertising information includes advertising information and additional information representative of a search key of said advertising information;

said apparatus further comprising first searching means for searching which advertising information is to be incorporated in said electronic information determined by the user, based on said additional information.

11. The apparatus according to claim 7, wherein

said electronic information is classified into a plurality of categories in accordance with contents of the information;
said advertising information includes advertising information and category information corresponding to the categories of said electronic information;
said apparatus further comprising second searching means for searching which advertising information is to be incorporated in said electronic information determined by the user, in accordance with the category of said electronic information determined by the user.

12. The apparatus according to claim 7, further comprising means for displaying, when the user selected to include said advertising information, said advertising information.

13. A method of selling electronic information required by a user by writing the information to a computer readable and writable recording medium, comprising:

the step of user's determination of which electronic information is to be utilized;
the step of user's selection of whether advertising information is to be included in said electronic information determined by the user or not; and
the step of selectively executing an operation of writing said electronic information determined by said user with said advertising information incorporated to said recording medium when the user selected to include said advertising information in said step of selection, or an operation of writing said electronic information determined by said user only to said recording medium when the user selected not to include

said advertising information.

14. The method according to claim 13, further comprising the step of charging different prices of sales to the user dependent on whether said advertising information is included or not. 5
15. The method according to claim 13, further comprising the step of writing a part of said electronic information determined by the user or information different from said electronic information determined by the user, when the user selected not to include said advertising information. 10
16. The method according to claim 13, wherein 15
said advertising information includes advertising information and additional information indicative of a search key of said advertising information; 20
said method further comprising the step of searching which advertising information is to be incorporated in said electronic information determined by the user, based on said additional information. 25
17. The method according to claim 13, wherein
said electronic information is classified into a plurality of categories in accordance with contents of information; 30
said advertising information includes advertising information and category information corresponding to the categories of said electronic information; and 35
said method further comprising the step of searching which advertising information is to be incorporated in said electronic information determined by the user, based on the category of said electronic information determined by the user. 40
18. The method according to claim 13, further comprising the step of displaying, when the user selected to include said advertising information, said advertising information. 45

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FIG. 1

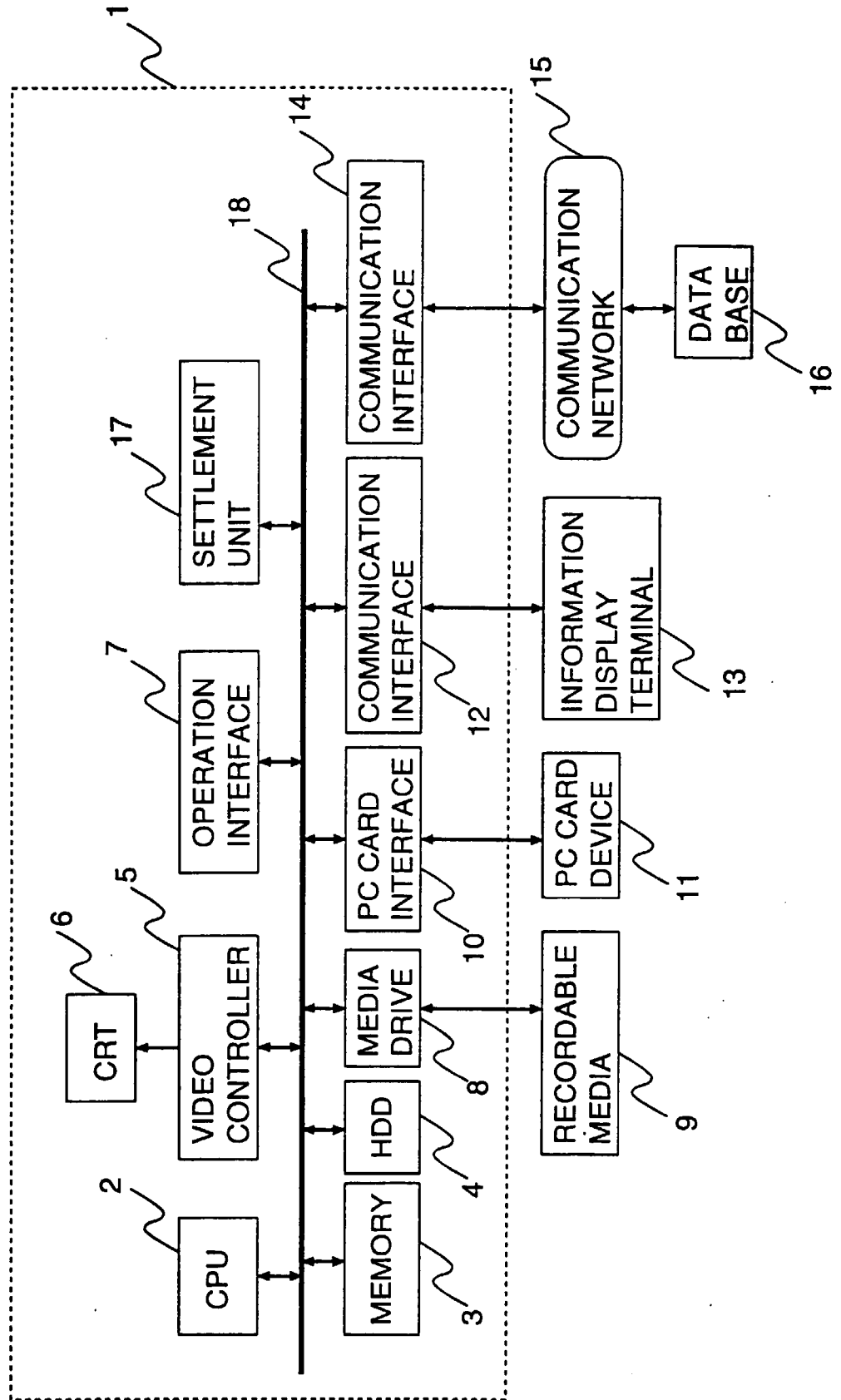


FIG. 2A

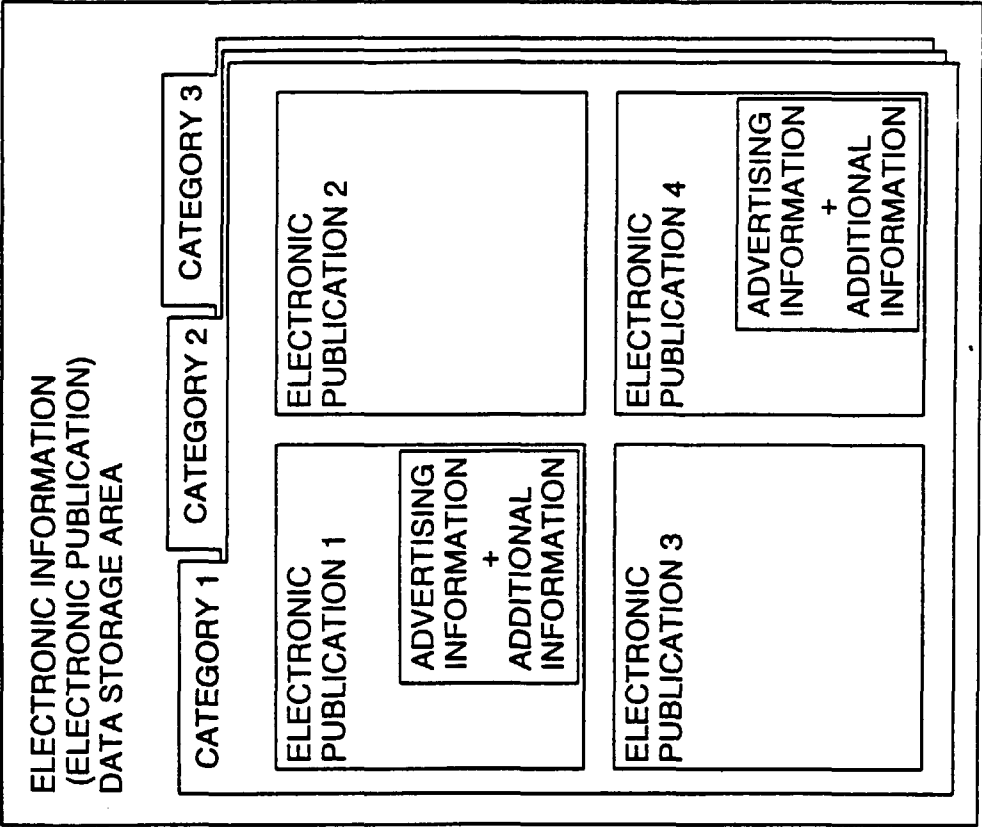


FIG. 2B

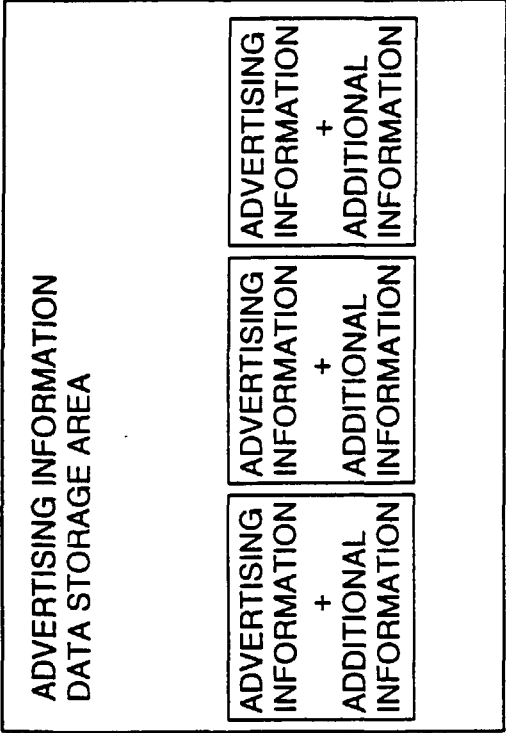


FIG. 2C

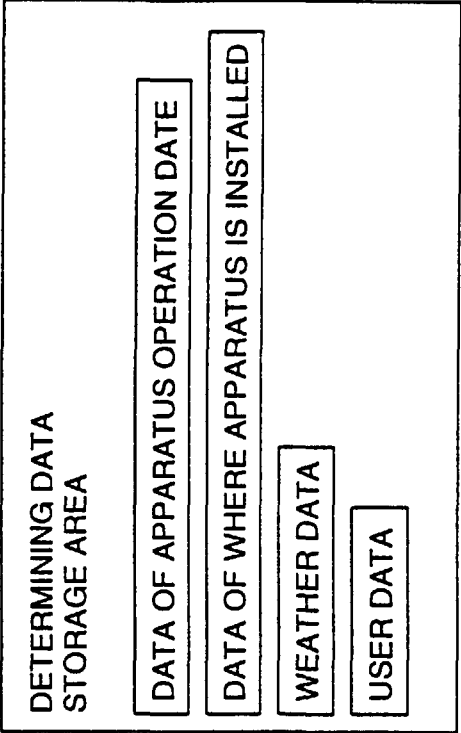


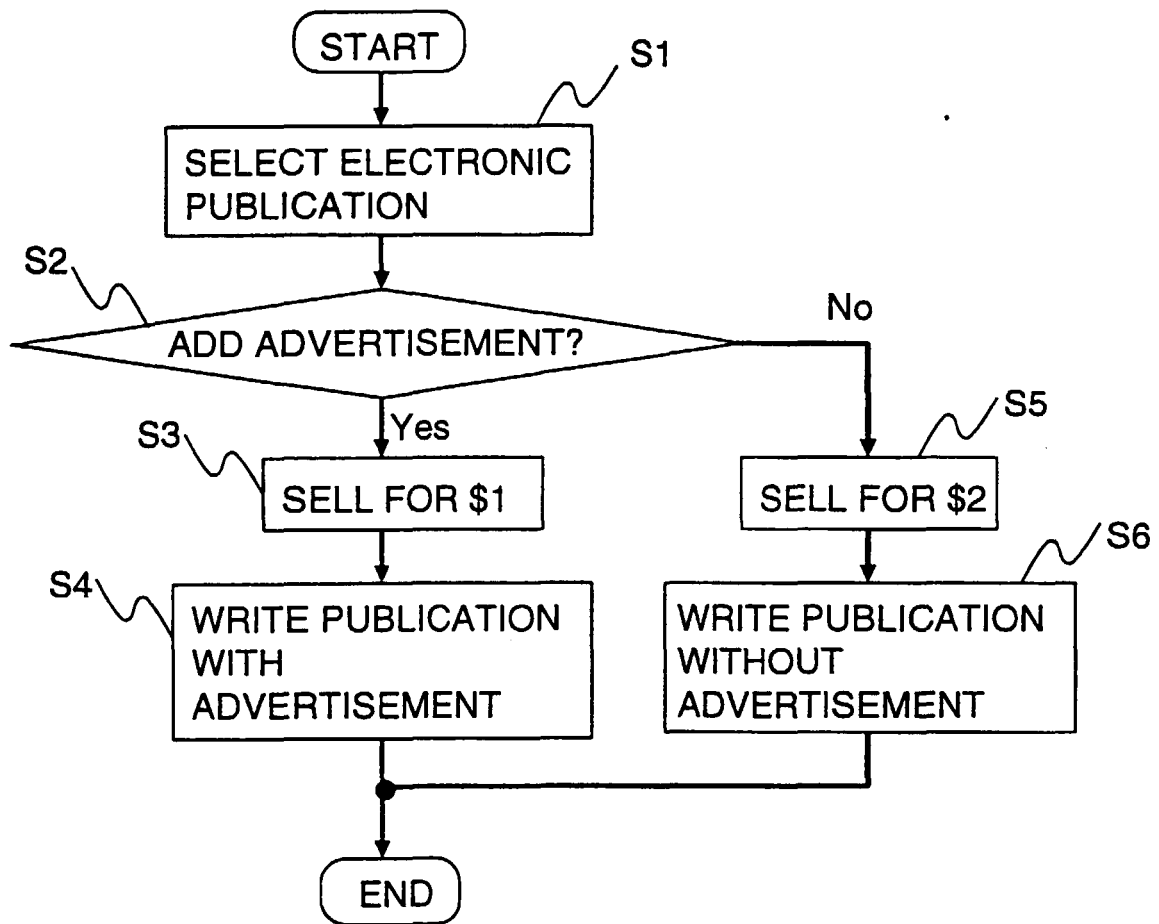
FIG. 3

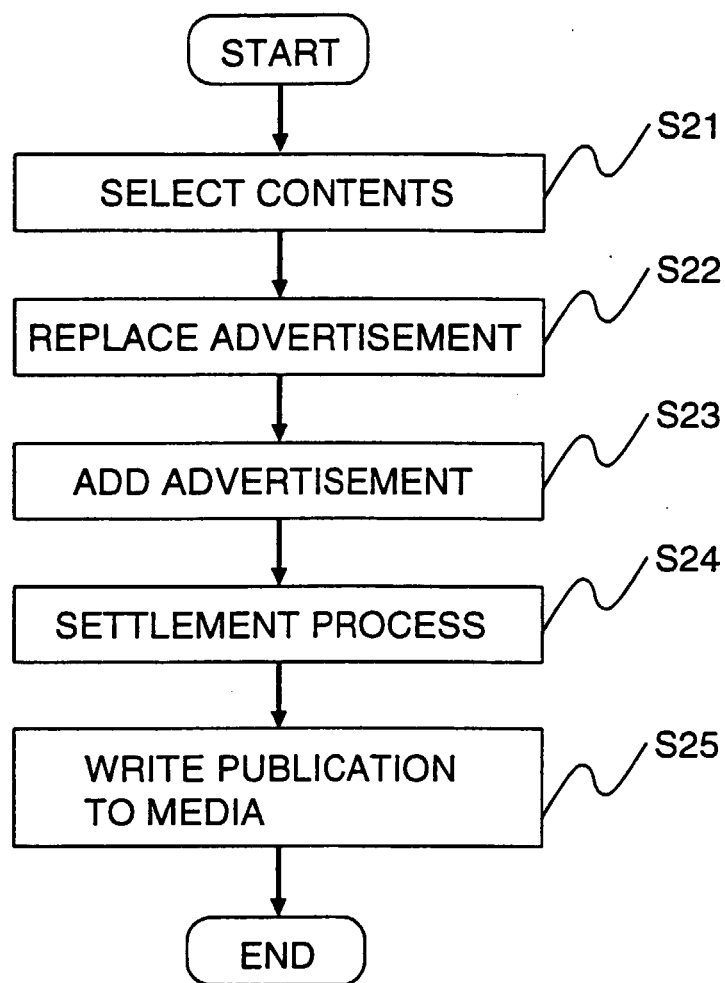
FIG. 4

FIG. 5A

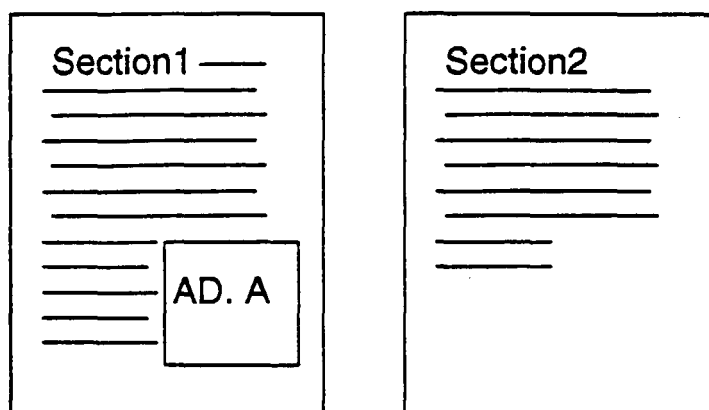


FIG. 5B

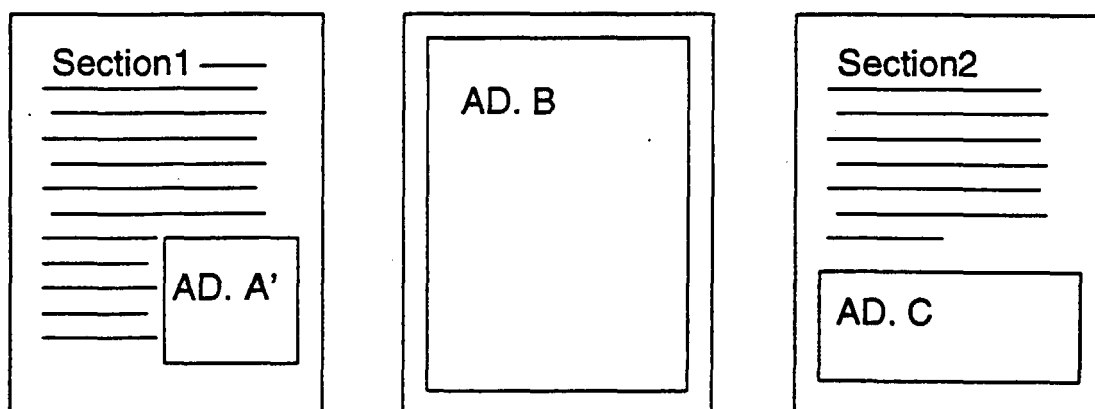


FIG. 6