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(Note from the Japan Patent Office: The following are registered trademarks.)

Real Player
Media Player
Quick Time

(71) Applicant 500269314
EJworks.com Co., Ltd.
2-15-10 Shin-Yokohama, Kohoku-ku, Yokohama

(74)Agent 100095407
Patent Attorney Mitsuru Kimura

(72) Inventor: Saeki Sincerity
2-22-55 Tsurukawa, Machida City, Tokyo

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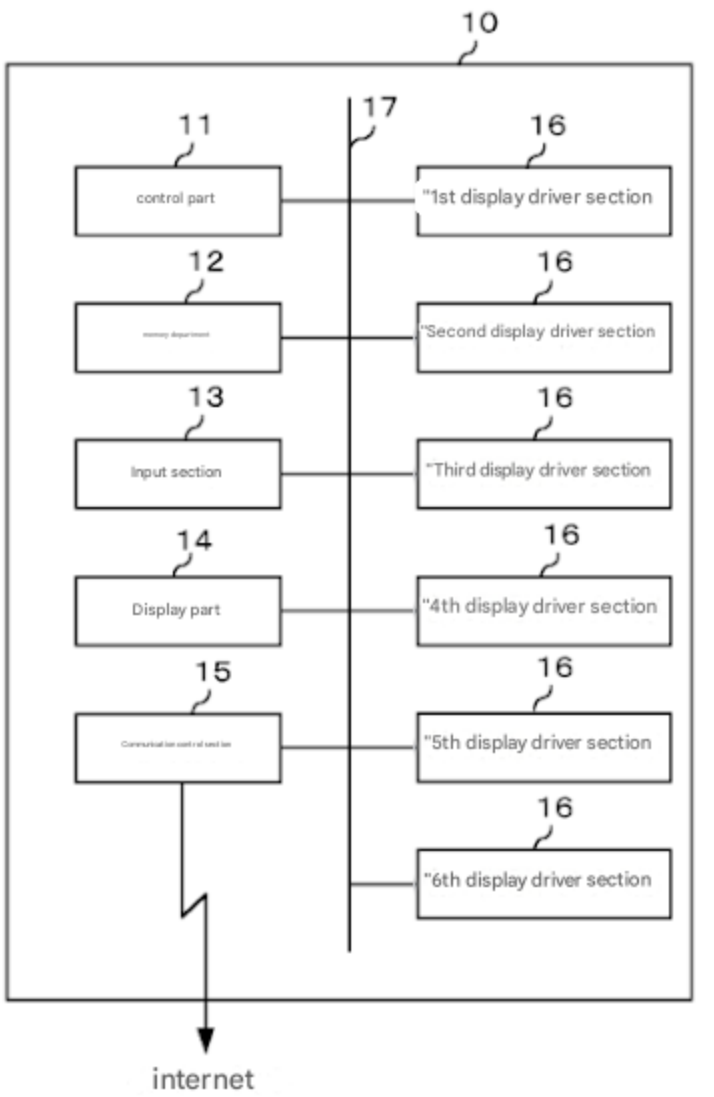
(54) [Title of Invention] Information processing device, information processing method, and program

(57) [Summary]

A plurality of images are displayed on a single display device.

[Solution] Information processing device 10 generates a plurality of display screens for displaying video, and then specifies at least one or more display screens from the generated plurality of display screens on which to display the video. Information processing device 10 then transmits a distribution request for the video to be displayed on each of the specified at least one or more display screens to a video distributor, and displays the video indicated in the transmitted distribution request on the specified display screen.

[Selection diagram] Figure 1



[Claims]

[Request 1]

An information processing device that displays a plurality of distributed videos, comprising: a

display screen generation means that generates a plurality of display screens that display the videos; a

display screen designation means that designates at least one or more display screens on which to display the videos from among the plurality

of display screens generated by the display screen generation means; a video distribution request

transmission means that transmits a distribution request for the videos to be displayed on each of the at least one or more display screens designated by the

display screen designation means to a video distribution source; and a video display screen display means that displays

the videos indicated in the distribution requests transmitted by the video distribution request transmission means on the display screen

designated by the display screen designation means.

[Request 2]

The video distributed by the video distributor has embedded therein access information for accessing related videos related to the video,

a related video display screen designation means for designating at least one related video display screen from among the display screens

on which the related video is to be displayed; and a related video

display screen designation means for sending a request for delivery of the related information to a video distributor based on access information

for accessing the related video to be displayed on the related video display screen designated by the related video display screen designation means.

a related video distribution request transmission means for receiving

the related video indicated by the distribution request transmitted by the related video distribution request transmission means, and a related video display screen display means for receiving

the related video indicated by the distribution request transmitted by the related video distribution request transmission means and displaying the received related video on the

related video display screen specified by the related video display screen specification means;

2. The information processing device according to claim 1, further comprising:

[Request 3]

3. The information processing device according to claim 1, wherein each of the plurality of display screens

generated by the display screen generating means comprises the display screen specifying means and the related video display screen

specifying means.

[Request 4]

a video display stopping means for stopping the display of videos other than the related video when a video other than the related video is

displayed on at least one of the related video display screens specified by the related video display screen specifying means;

Equipped with

The related video display screen display means

The related video indicated by the distribution request transmitted by the related video distribution request transmitting means is received, and the

received related video is displayed on the related video display screen designated by the related video display screen designating means.

displayed on the display screen,

4. The information processing device according to claim 1, wherein the information processing device is a computer.

【Request 5】

a simultaneous image display input means for inputting input information for simultaneously displaying images on the plurality of

display screens generated by the display screen generation means;

a total video distribution request sending means for sending a distribution request for the video to be displayed on each of all the display

screens to a video distribution source in accordance with the input information input by the simultaneous video display input

means;

a full image display screen display means for displaying the full image on a display screen;

5. The information processing device according to claim 1, further comprising:

[Request 6]

An information processing method for displaying a plurality of distributed videos, comprising:

generating a plurality of display screens for displaying the video;

designating at least one display screen on which to display the video from among the plurality of display screens that have been generated;

Sending a request to a video distribution source for video to be displayed on each of the at least one or more specified display screens;

Displaying the video indicated by the transmitted distribution request on the designated display screen.

An information processing method characterized by:

[Request item 7]

generating a plurality of display screens for displaying the video;

a step of designating at least one display screen on which to display an image from among the plurality of generated display screens;

a step of transmitting a request for delivery of video to be displayed on each of the at least one or more specified display screens to a video delivery source;

a procedure for displaying the video indicated in the transmitted distribution request on the specified display screen.

[Detailed description of the invention]

【 0 0 0 1 】

[Technical Field to which the Invention Belongs]

The present invention relates to an information processing device, an information processing method, and a program for displaying mutually related images.

【 0 0 0 2 】

[Conventional technology]

In recent years, the Internet has become more widely available and broadband has become more widespread, and not only are text and still images being delivered to user terminals, but moving images, i.e., video, are also being delivered to user terminals.

By the way, in order to stream video and audio on the Web via the Internet, video playback software must be installed on the user's device.

Widely used software for playing video includes Real Player, Media Player, and Quick Time.

【 0 0 0 3 】

[Problem to be solved by the invention]

However, the video playback software used on user terminals that play the video 30 requires a browser plug-in, and the video is distributed to the user terminal using the limited functions of the standard player that exists for each format. This means that the software simply streams the video, and users are unable to receive video distribution services such as displaying other videos related to the streamed video on multiple screens.

【 0 0 0 4 】

In view of the above-mentioned problems, it is an object of the present invention to provide an information processing device or the like that can display multiple images on a single display device, and also to provide an information processing device or the like that can display multiple related images on a single display device.

【 0 0 0 5 】

[Means to solve the problem]

In order to achieve the above object, an information processing device according to a first aspect of the present invention comprises:

An information processing device that displays a plurality of distributed videos,

a display screen generating means for generating a plurality of display screens for displaying images;

a display screen designation means for designating at least one display screen on which to display an image from among the plurality of display screens generated by the display screen generation means;

a video distribution request sending means for sending a video distribution request to a video distribution source to be displayed on each of at least one or more display screens designated by said display screen designation means;

and a video display screen display means for displaying the video indicated by the distribution request transmitted by the video distribution request transmission means on the display screen designated by the display screen designation means.

Features.

【 0 0 0 6 】

With this configuration, a plurality of videos can be displayed on one display device.

【 0 0 0 7 】

The video distributed by the distribution source has embedded therein access information for accessing related videos related to the video,

At least one related video display screen for displaying the related video is selected from the display screens.

a related video display screen designation means for designating the related video display screen;

A request for distribution of the related information is sent to a distributor of the video based on access information for accessing the related video to be displayed on the related video display screen designated by the related video display screen designation means.

a related video distribution request sending means for receiving the related video distribution request;

The video display device may also include a related video display screen display means for receiving the related video indicated by the distribution request sent by the related video distribution request sending means, and displaying the received related video on the related video display screen specified by the related video display screen specifying means.

This allows a plurality of related videos to be displayed on one display device.

【 0 0 0 8 】

Each of the plurality of display screens generated by the display screen generating means may include the display screen specifying means and the related video display screen specifying means.

【 0 0 0 9 】

When an image other than the related image is displayed on at least one of the related image display screens designated by the related image display screen designation means, the display of the image other than the related image is stopped.

a video display stopping means for stopping the video display;

Equipped with

The related video display screen display means

The related video indicated by the distribution request transmitted by the related video distribution request transmitting means is received, and the received related video is displayed on the related video display screen designated by the related video display screen designating means.

It may be displayed on the display screen.

【 0 0 1 0 】

Simultaneously displaying images on the plurality of display screens generated by the display screen generating means

a simultaneous video display input means for inputting input information;

a total video distribution request sending means for sending a distribution request for the video to be displayed on each of all the display screens to a video distribution source in accordance with the input information input by the simultaneous video display input means;

The image display device may further comprise a full image display screen display means for displaying the full image on the display screen.

【 0 0 1 1 】

Further, an information processing device according to a second aspect of the present invention comprises:

An information processing method for displaying a plurality of distributed videos, comprising:

generating a plurality of display screens for displaying the video;

At least one or more display screens on which to display the video are selected from the plurality of display screens that have been generated.

specify,

A video distribution request to be displayed on each of at least one specified display screen is sent to the video distribution Send to source,

The video indicated by the transmitted distribution request is displayed on the designated display screen.

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【 0 0 1 2 】

With this configuration, a plurality of videos can be displayed on one display device.

【 0 0 1 3 】

A program according to a third aspect of the present invention comprises:

generating a plurality of display screens for displaying the video;

At least one or more display screens 50 for displaying an image from among the plurality of display screens generated.

Steps to specify

a step of transmitting a request for delivery of video to be displayed on each of the at least one or more specified display screens to a video delivery source;

The computer is caused to execute the procedure of displaying the video indicated by the transmitted distribution request on the specified display screen.

【 0 0 1 4 】

With this configuration, a plurality of videos can be displayed on one display device.

【 0 0 1 5 】

[Embodiment of the invention]

An information processing device according to an embodiment of the present invention will be described below.

【 0 0 1 6 】

FIG. 1 is a block diagram showing the configuration of an information processing device according to an embodiment of the present invention.

As shown in FIG. 1, the information processing device 10 is composed of a control unit 11, a memory unit 12, an input unit 13, a display unit 14, a communication control unit 15, and first to sixth display driver units 16, and each unit is connected to one another by a bus 17.

【 0 0 1 7 】

The control unit 11 includes a CPU (Central Processing Unit) and executes a process (to be described later) for displaying the distributed video on the display unit 14 in accordance with a control program.

【 0 0 1 8 】

ROM (Read Only Memory), a hard disk drive, etc., The storage unit 12 includes RAM (Random Access Memory), and as shown in FIG. 2(a), includes the control program 121, an attribute data storage file 122, and a working area 123 for the control unit 11.

【 0 0 1 9 】

As shown in FIG. 2(b), the attribute data storage file 122 stores attribute data generated based on attribute information embedded in the distributed video.

The attribute data includes data items including the order in which the data was read from the video and the contents of the attribute information.

The attribute information includes: 1) the category to which the distributed video belongs (for example, a category belonging to sports); 2) if there is video related to the distributed video (hereinafter referred to as related video), the URL (URL) required to access the video storage file that stores the related video.

It is equipped with a uniform resource locator and other functions.

【 0 0 2 0 】

For example, when video frames are distributed as shown in FIG. 3, attribute information including information such as the category "sports" and URL "http://www.soccer.co.jp" is embedded in the frame indicated by symbol A, attribute information including information such as the category "sports" and URL "http://www.baseball.co.jp" is embedded in the frame indicated by symbol B, and attribute information including information such as the category "sports" and URL "http://www.baseball.co.jp" is embedded in the frame indicated by symbol C.

Attribute information that includes information such as "http://www.marathon.co.jp" is embedded.

【 0 0 2 1 】

The input unit 13 includes a keyboard with cursor keys, numeric input keys, etc., and a mouse, and outputs press signals of keys pressed on the keyboard and operation signals of the mouse to the control unit 11. The input unit 13 also inputs distributed video data to the control unit 11.

【 0 0 2 2 】

The display unit 14 is configured with a CRT (Cathode Ray Tube), a liquid crystal display panel, or the like, and displays an image according to the display data output from the control unit 11.

The communication control unit 15 controls communication with a video distribution server that distributes videos.

【 0 0 2 3 】

The first display driver unit 16 includes a driver that displays an image on the first display screen out of six display screens (described later) formed on the display unit 14, a RAM that temporarily stores the image (image data) to be displayed on the first display screen, and the like.

The second display driver unit 16 is a driver for displaying an image on the second display screen.
It is equipped with RAM etc. that temporarily stores the images displayed on the display screen.
Similarly, the third display driver unit 16 includes a driver for displaying an image on the third display screen, a RAM for temporarily storing the image to be displayed on the third display screen, and the like.
Similarly, the fourth display driver unit 16 includes a driver for displaying an image on the fourth display screen, a RAM for temporarily storing the image to be displayed on the fourth display screen, and the like.
Similarly, the fifth display driver unit 16 includes a driver for displaying an image on the fifth display screen, a RAM for temporarily storing the image to be displayed on the fifth display screen, and the like.
Similarly, the sixth display driver unit 16 includes a driver for displaying an image on the sixth display screen, a RAM for temporarily storing the image to be displayed on the sixth display screen, and the like.

【 0 0 2 4 】

Next, the operation of the information processing device according to this embodiment will be described with reference to the flowcharts shown in FIGS.

【 0 0 2 5 】

When the power is turned on by a user operation, the control unit 11 of the information processing device 10 displays a home screen (not shown) on the display unit 14 (step S1). Thereafter, when the user double-clicks a predetermined icon displayed on the home screen, the control program 121 designated by the icon starts to run. Thereafter, as shown in FIG. 6, the control unit 11 displays six display screens, consisting of a first display screen to a sixth display screen, capable of displaying images, as well as a "Display all" button and an "Exit" button on the display unit 14 (step S2).

) 。

【 0 0 2 6 】

As shown in FIG. 7, each of the first to sixth display screens includes a first clickable map, a second clickable map, a third clickable map, and a fourth clickable map.

The first clickable map accesses an image file or the like that stores the image to be displayed on the display screen.
The URL to access is linked.
When the second clickable map is clicked, the attribute information is stored in the attribute data storage file 12.
2 to output instructions that can be read from the control unit 11.
When the third clickable map is clicked, an instruction is issued to display on this display screen an image (hereinafter referred to as a related image) indicated by the attribute data read from the attribute data storage file 122 when the second clickable map is clicked on another display screen.
The signal is output to unit 11.
The fourth clickable map, when clicked, changes the image displayed on the display screen.
An instruction to stop the operation is output to the control unit 11.

【 0 0 2 7 】

The "all display" button is a button used to display images on all of the first to sixth display screens.

The "Exit" button is available on the display screens where images are displayed among the 1st to 6th display screens.
Used to stop the video.

【 0 0 2 8 】

After displaying the first to sixth display screens, etc. on the display unit 14, when the user clicks on the first clickable map on the first display screen (i = 1, 2, ..., 6) (step S3), the control unit 11 starts up the first display driver unit 16, accesses a video storage file, etc. that stores the video specified in the URL linked to this first clickable map, and sequentially reads out the video data from this video recording file, etc. (step S4).

【 0 0 2 9 】

When attribute information is embedded in the read video data, the control unit 11 reads the attribute information from the video data, generates attribute data such as that shown in FIG. 2, stores the generated attribute data in the attribute data storage file 122 of the storage unit 12, and stores the video data in a RAM provided in the first display driver unit 16 (step S5).

【 0 0 3 0 】

The first display driver unit 16, which has been started by the control unit 11, sequentially reads out the video data stored in RAM by its own driver, and displays the video according to the read video data on the i-th display screen (step S6).

For example, if the video storage file specified by the URL linked to the first clickable map stores video data relating to sports, the video displayed on the first display screen will be video relating to sports.

【 0 0 3 1 】

Thereafter, when the second clickable map is clicked by the user (step S7), the control unit 11 reads the m-th attribute data from the attribute data storage file 122 in the storage unit 12 and stores it in the work area of the storage unit (step S8). Note that, in the first case, m is 1.

【 0 0 3 2 】

The control unit 11 then determines whether or not the third clickable map on a kth display screen (k≠i, k=1, 2, 6) other than the ith 、 display screen , ・ ・ ・ has been clicked by a user operation (step S9). If the control unit 11 determines that the third clickable map on the kth display screen has not been clicked (step S9; NO), it continues to wait for the third clickable map to be clicked. On the other hand, if the control unit 11 determines that the third clickable map on the kth display screen has been clicked (step S9; YES), it further determines whether or not the kth display driver unit is running (step S10).

【 0 0 3 3 】

When the control unit 11 determines that the kth driver unit 16 is activated (step S10; YES), it determines whether or not the fourth clickable map on the kth display screen has been clicked by a user operation (step S11). When the control unit 11 determines that the fourth clickable map on the kth display screen has not been clicked (step S11; N), it continues to wait for the fourth clickable map to be clicked. On the other hand, when the control unit 11 determines that the fourth clickable map O on the kth display screen has been clicked (step S11; YES), it stops the activation of the kth display driver unit 16, ends the display of the video being displayed on the kth display screen (step S12), and proceeds to the next step S13.

【 0 0 3 4 】

In step S10, if the control unit 11 determines that the k-th driver unit 16 is not running (step S10; NO), it starts up the k-th driver unit 16 (step S13). Thereafter, the control unit 11 accesses a video storage file or the like specified by a URL indicated by the attribute data stored in the work area, sequentially reads out the related video data stored in the video file or the like, and stores it in the RAM of the k-th display driver unit 16 (step S14).

【 0 0 3 5 】

The driver included in the k-th display driver unit 16 reads video data from the RAM and outputs the video data to the k-th display unit 16.

The related video is displayed on the display screen (step S15).

【 0 0 3 6 】

Thereafter, the control unit 11 adds 1 to the variable m in the working area, sets the obtained value as a new variable m (step S15), moves the process to step S8, and continues the above-mentioned process until the user obtains the related information required.

【 0 0 3 7 】

The operation when the "display all" button in the display unit 14 on which the first to sixth display screens are displayed is clicked in step S2 will be described.

【 0 0 3 8 】

When the user clicks the "Display All" button, the control unit 11 starts up the first display driver unit 16. Thereafter, the control unit 11 accesses the video storage file that stores the video to be displayed on the first display screen, and reads the video data from the video storage file.

Then, the control unit 11 stores the read video data in the RAM of the first display driver unit 16.

【 0 0 3 9 】

Next, the first display driver unit 16 reads the video data from the RAM and displays an image according to the video data on the first display screen.

【 0 0 4 0 】

Thereafter, the control unit 11 similarly causes the second to sixth display screens to sequentially display images on each display screen.

【 0 0 4 1 】

In step S2, the operation when the "End" button in the display unit 14 on which the first to sixth display screens are displayed is clicked will be described.

【 0 0 4 2 】

When the user clicks the "End" button, the control unit 11 stops the activation of the first display driver unit 16 to the sixth display driver unit 16 in order, and starts the first display screen to the sixth display screen 20.

The display of the image on the screen is stopped, and the reading of the image is stopped.

【 0 0 4 3 】

According to the information processing device 10 of this embodiment, a plurality of display screens for displaying images are generated.

The video is then distributed to at least one or more designated display screens from among the generated display screens, so that multiple videos can be displayed on one display device.

【 0 0 4 4 】

Furthermore, according to this information processing device 10, a request for delivery of a related video to be displayed on a display screen displaying the specified related video is sent to the video distributor, and the related video requested for delivery is displayed on the display screen, so that multiple related videos can be displayed on a single display device.

【 0 0 4 5 】

The information processing device 10 according to the embodiment described above is configured to generate six display screens on the display unit 14.

It goes without saying that the configuration is not limited to this.

【 0 0 4 6 】

[Effect of the invention]

As described above, according to the present invention, a plurality of images can be displayed on one display device.

Furthermore, it is possible to display a plurality of related images on a single display device.

[Brief explanation of the drawing]

FIG. 1 is a block diagram illustrating a configuration of an information processing device according to an embodiment of the present invention.

2A is a diagram illustrating the configuration of a storage unit in FIG. 1.

FIG. 10B is a diagram showing the structure of an attribute data storage file.

[Figure 3] A diagram explaining attribute information embedded in video.

[0016] FIG. 4 is a flowchart illustrating the operation of the information processing device according to the embodiment.

[0016] FIG. 5 is a flowchart illustrating the operation of the information processing device according to the embodiment.

6A and 6B are diagrams illustrating an example of a display screen formed on the display unit in FIG. 1.

7A and 7B are diagrams illustrating the display screen in FIG. 6.

[Explanation of symbols]

10 Information processing equipment

11 Control section

12 Memory Department

121　control program

122　Attribute data storage file

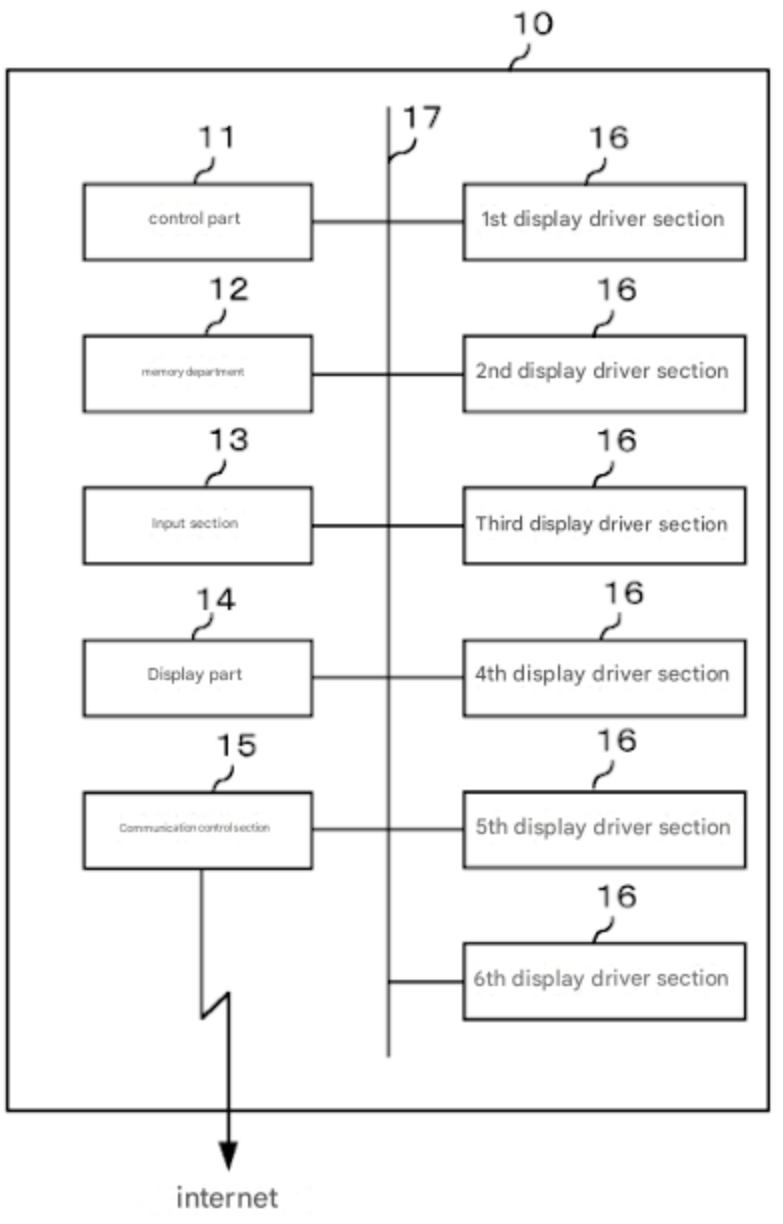
13　Input section

14　display part

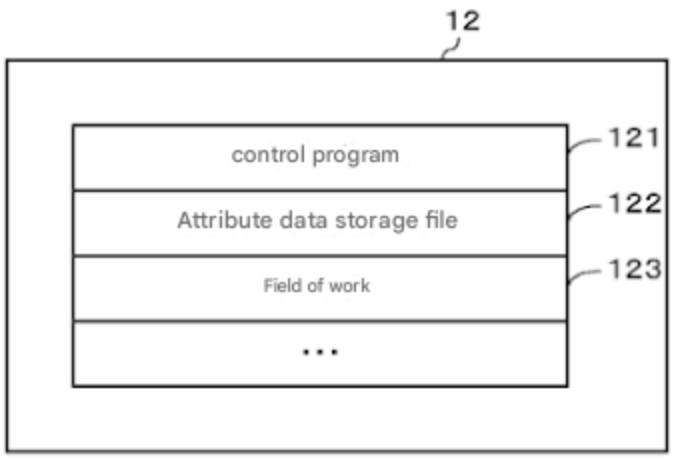
15　Communication control section

16 Display driver section

[Figure 1]



[Figure 2]



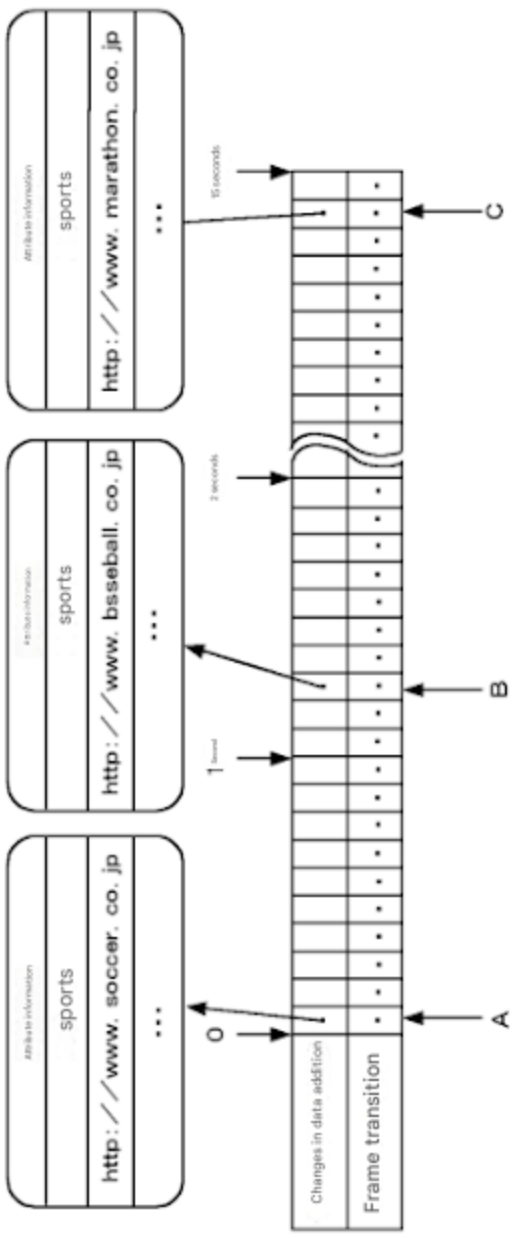
(a)

122

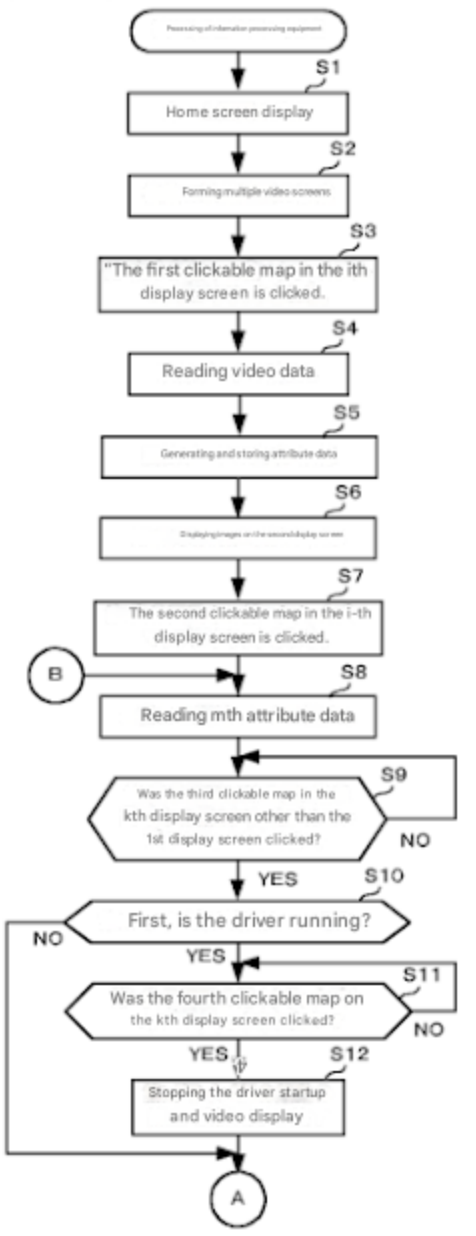
number	Contents of attribute information	
	Classification	URL
1	sports	http://www.soccer.co.jp
2	sports	http://www.baseball.co.jp
3	sports	http://www.marathon.co.jp
...	...	...

(b)

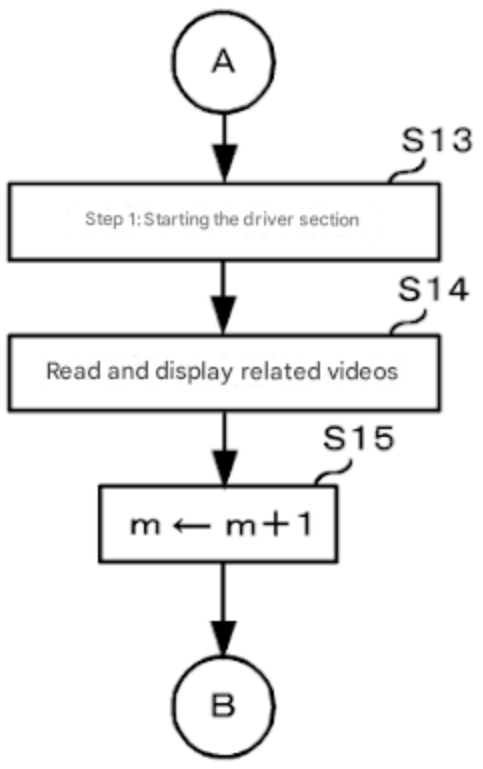
[Figure 3]



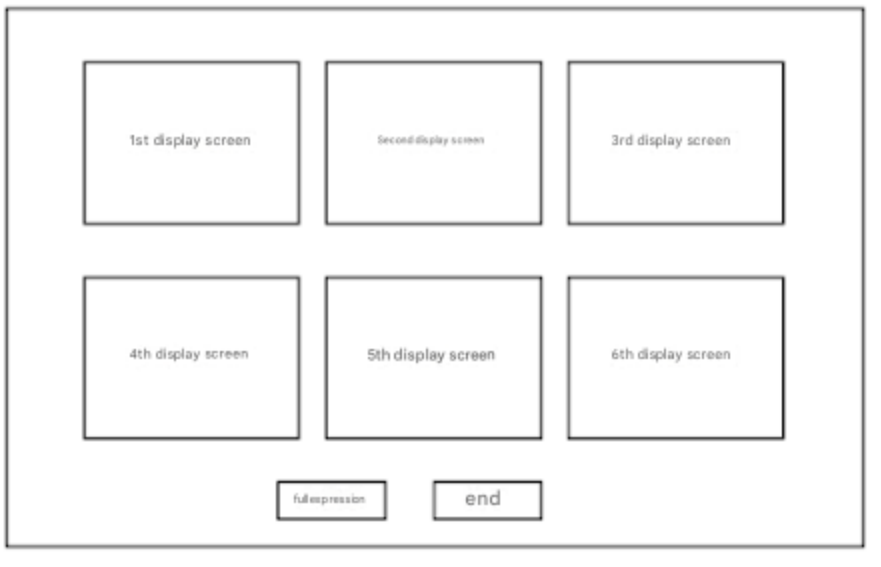
[Figure 4]



[Figure 5]



[Figure 6]



[Figure 7]