

panying drawings. FIG. 1 is a view showing text editing software according to the present invention. A word processing application program 403 loads, saves, and edits document data (document file) 111 having one or a plurality of pages. The word processing application program 403 can be executed by a computer. The word processing application program 403 can also newly create and save document data 112. The edit function of the word processing application program 403 includes editing of each page such as replacement, copying, and deletion of a page, and editing such as insertion, copying, movement, and deletion of an object (e.g., a figure, image, text, or text box) in a page. An editor program 100 opens designated document data to display a preview image in a user interface window. While seeing the user interface window, the operator can edit document data by selecting an object in the preview image or selecting a command menu displayed in the user interface window.

[0053] FIG. 2 is a block diagram showing the schematic arrangement of a computer in which the program of the present invention runs. A CPU 200 controls to execute application programs (including the word processing application program 403 according to the present invention), printer driver programs, an OS, network printer control programs, and the like, which are stored in an HD (Hard Disk) 205, and to temporarily store, in a RAM 202, information, files, and the like necessary to execute programs. A ROM 201 stores programs such as a basic I/O program, and various data such as font data and template data used in word processing. The RAM 202 functions as a main memory, work area, and the like of the CPU 200. An external storage drive 203 can access programs, data, and the like stored in a removable medium 204 and load them into the computer system. The medium 204 stores programs and related data to be described in the first embodiment. FIG. 4 shows the format of contents stored in the medium 204. The HD 205 stores application programs (including the word processing application program 403 according to the present invention), printer driver programs, an OS, control programs, related programs, and the like, and document data files according to the first embodiment. The user uses a keyboard 206 in order to input a device control command instruction and the like to the client computer. The computer system has a pointing device in addition to the keyboard. The operator can use the pointing device to select an object or command menu item in a user interface window provided by the word processing application program 403. The operator can also use the pointing device to designate processing such as movement, copying, paste, or position adjustment of a selected object.

[0054] A display 207 displays a command input from the keyboard 206, a printer status, and the like. A system bus 208 manages the data flow in the client computer. A network interface (to be referred to as an I/F hereinafter) 209 is a communication interface for connecting to a local area network (LAN) or the Internet.

[0055] FIG. 3 shows a memory map when programs including the word processing application program 403 according to the present invention are loaded into the RAM 202 and become executable. The first embodiment will describe an example of loading programs and related data from the medium 204 directly into the RAM 202, and executing the programs. Alternatively, programs according to the present invention may be loaded from the HD 205 into the RAM 202 every time the programs run from the medium

204. Examples of the medium for recording programs according to the present invention are an FD, CD-ROM, DVD, and IC memory card. It is also possible to record programs according to the present invention in the ROM 201, store them as part of the memory map, and execute them directly by the CPU 200.

[0056] In FIG. 3, when turning on the computer, the OS loads a basic I/O program 301 from the HD 205 into the RAM 202. The basic I/O program 301 is an area containing a program having, e.g., an IPL (Initial Program Loading) function of starting operating the OS. An operating system (OS) 302 manages the hardware and software resources of the computer and controls the whole computer. For example, the OS mediates display of a user interface window provided by the word processing application program 403. Also, the OS also provides processing to accept an input in an editing operation and the like. An application program implements interaction with the user via the OS. In addition, a control program 303 and related data 304 are expanded in the memory, and a work area 305 used to execute the program by the CPU 200 is reserved. The related data contains a document data file.

[0057] FIG. 4 is a view showing an example of the file layout in a recording medium which records files of the word processing application program 403 according to the first embodiment. In FIG. 4, a data content 400 of the medium 204 contains volume information 401 representing data information, directory information 402, the word processing application program 403 according to the first embodiment, and data (document data file) 404 related to the word processing application program 403. The program 403 is made up of program codes for executing the procedures of flowcharts shown in FIGS. 18 to 22.

[0058] FIG. 5 shows an example of document data of a plurality of pages to be processed in the present invention. Document data 500 has three page data: page data 501, page data 502, and page data 503. Each page data has a text area for inputting the title and text of each page, and a table data area for describing table data. In order to improve the appearance of a page upon switching, the sizes and positions of titles 1 to 3, and the position of the table data area are desirably kept unchanged between pages. In FIG. 5, however, the positions of titles 1 and 2 in the pages 501 and 502 are different from that of title 3 in the page 503. In this manner, the document data 500 is divided into pages. When the document data file 500 is, e.g., a sequential file, each record of the sequential file implements each page. The document data file can also take a structure. For example, respective pages are set as independent files (page files), one or a plurality of page files are combined by linking them to an upper node, and one or a plurality of nodes are combined by linking them to an upper node. Repeating this structure gives document data a hierarchical structure. In this case, the top node represents the entire document. In any case, the word processing application program 403 according to the first embodiment generates and edits document data having a plurality of pages. The first embodiment will be described using the document data 500 as a processing target.

[0059] Each page data contains information (object related information) related to objects such as a text box, figure, and image laid out in the page. The object related information contains an identifier (object ID: to be referred to as a figure