

## ELECTRONIC PAPER FILE

### BACKGROUND OF THE INVENTION

#### [0001] 1. Technical Field

[0002] This invention relates to an electronic paper file formed like a notebook by binding a plurality of electronic papers that are flexible media.

#### [0003] 2. Description of the Related Art

[0004] The more the recent information technology society progresses, the more the performance of the display medium such as CRT (Cathode Ray Tube), LCD (Liquid Crystal Display), and so on had been improved rapidly. However, regarding the facility of reading and using, those display media were not superior to the paper that has always been used as an information medium. Therefore, a new concept called the "Electronic Paper" was proposed as a flexible display medium, and the technology to materialize the electronic paper are studied in many ways (See pp209 to 251 of "Japan Hardcopy '99—Theses" published by The Imaging Society in Japan).

[0005] Recently, the electronic paper file formed like a notebook by binding a plurality of electronic papers has proposed (PCT Japanese translation publication No. 11-502950). Such electronic paper file not only can make easy to manage many electronic papers, but also can make efficient use of the electronic paper file as the display medium that is easier to read and use.

[0006] However, it happened that the conventional electronic paper file couldn't display the whole of mass data like the data of the encyclopedia, the collection of works, and etc. by the electronic paper. Such problem can be solved by attaching enormous numbers of pages of electronic papers to the electronic paper file, but such electronic paper file is not only bulky to carry about, but also hard to operate.

[0007] In addition, in the conventional electronic paper file, the content displayed by the electronic paper couldn't be edited by a simple operation. That is to say, it is preferable that the electronic paper is arranged so as to edit the content displayed by the electronic paper in such a way of writing characters or illustrations into a paper page, which is a familiar habit to human. However, it is true that such editing technology has not been established yet.

### SUMMARY OF THE INVENTION

[0008] The invention is proposed considering the above existing conditions, and has an object to provide an electronic paper file with the superior operating performance. In order to achieve the object, the invention adopts following means.

[0009] It is assumed in the invention that an electronic paper file comprises an electronic paper of a flexible display medium and a cover to which a plurality of electronic papers can be attached.

[0010] First storage means stores display-data to be displayed on the electronic paper. Page selecting means selects a desired page. And first display control means obtains display-data corresponding to the desired page selected by the page selecting means from the first storage means, and then display the data on the electronic paper.

[0011] As configured above, in case where enormous numbers of pages of electronic papers are not attached to the electronic paper file, the electronic paper file can display the whole of mass data like the data of the encyclopedia and the collection of works by the electronic papers. Accordingly, it is possible to improve the operating performance of the electronic paper file.

[0012] In addition, in order to edit the content displayed by the electronic paper by a simple operation, the under mentioned means may be adopted.

[0013] Position selecting means selects a specific position or area on the electronic paper. Editing means edits the display-data corresponding to the selected position or area and updates the other display-data to be displayed on the other electronic paper, the data that is relevant to this editing. And display light control means displays the display-data edited by the editing means on the electronic paper.

[0014] According to the above configuration, when a specific page (of the electronic paper) is edited, the other pages relevant to this editing can be updated automatically.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. 1 is a block diagram of an electronic paper of this invention.

[0016] FIG. 2 is a diagram showing the page selecting means.

[0017] FIG. 3 is a device structure diagram of a display unit of the electronic paper.

[0018] FIG. 4 is a flowchart showing an operation of selecting a page number.

[0019] FIG. 5 is a diagram showing a content that is displayed after pressing a page feed button.

[0020] FIG. 6 is a diagram showing a state of displaying specific display-data on a specific electronic paper.

[0021] FIG. 7 is a flowchart showing an operation of displaying specific display-data on a specific electronic paper.

[0022] FIG. 8 is a diagram showing a state that an electronic paper is provided with page selecting means.

[0023] FIG. 9 is a diagram showing a state that an electronic paper is separated from a cover physically.

[0024] FIG. 10 is a diagram showing a state that a connecting terminal of a cover is fixed on the cover.

[0025] FIG. 11 is a flowchart showing an operation of imparting a connecting order ID Number to a connecting terminal.

[0026] FIG. 12 is an diagram explaining about a method of detecting whether an electronic paper is attached to a connecting terminal of a cover.

[0027] FIG. 13 is a diagram explaining about a method of detecting whether an electronic paper is attached to a connecting terminal of a cover.

[0028] FIG. 14 is a diagram explaining about a method of detecting whether an electronic paper is attached to a connecting terminal of a cover.