ELECTRONIC BOOK

BACKGROUND OF THE INVENTION

This invention relates, in general, to optical displays and, more particularly, to optical displays in electronic books.

Generally, electronic products contain a means of at least one interface with the user. This interface can be made through a number of available techniques, such as, but not limited to, audio, visual, or even vibration. Unfortunately, with respect to the visual interface, a single display typically is available even though users may like or require more than one visual image to be displayed at any one time.

Electronic products that display text or graphics today typically have available one screen that the user needs to view to interface with the electronic product or unit. However, even though the single screen actually displays a variety of images, e.g., data, text, video, or graphics, the unit or the product is not designed to be viewed as a conventional book with two hardcovers and a plurality of pages, thereby severely limiting today's electronic products. Further, in today's electronic products, manual or electromechanical switches have to be activated so that a consecutive screen full of text can be shown. This requires the user to actively locate the switch, whether it be a mouse, track-ball or keypad, for a sequential and smooth flow of information. In addition, these electronic products such as but not limited to; lap-top computers, palm-top computers, personal digital assistants etc., are not optimally designed to be held and interfaced like a conventional book to the user, thereby making these electronic products difficult to use. Moreover, all electronic products necessitate the user to become accustomed to a new way of interfacing data, text, video, and graphics etc. by interfacing with a single display that is different and less convenient than the standard approach of interfacing with a conventional book.

It is therefore very important to design a display and associated electronic controls that provide a smoother interface with data, text, video and graphics than is currently available today.

SUMMARY OF THE INVENTION

Briefly stated, a multi-piece body having a first hollow body with a surface and a second hollow body with a surface is provided. The first hollow body and the second hollow body are hingeably affixed such that the surface of the first hollow body and the surface of the second hollow body are capable of being closed on each other. Electronics including a processor for manipulating data, memory for data storage, an input for entering data, and an output for removing data is located in the multi-piece body. A plurality of optical displays located between the surface of the first hollow body and the surface of the second hollow body are operably coupled to the electronics, thereby enabling data to be optically displayed with the plurality of optical displays.

It is an advantage of the present invention to provide a plurality of optical displays with associated electronic controls that allows a user to interface in a more conventional manner.

It is a further purpose of the present invention to provide an electronic book that contains a plurality of pages that can be turned for a continual flow of data, text, video, and graphics.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a pictorial perspective illustration of an electronic book;

FIG. **2** is a sectional view of an electronic book;

FIG. **3** is a sectional view of another embodiment of an electronic book;

FIG. **4** is a pictorial illustration of yet another embodiment of an electronic book; and

FIG. **5** is a functional block diagram of an electronic book.

DETAILED DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates an electronic book **101** that includes several main elements or features, such as a multiple piece body or multi-piece body **102** having first hollow body **103** with a surface **105** and an edge **104**, second hollow body **108** with a surface **110** and an edge **109**, a third hollow body **112** having a surface **115** and edges **113**, **114**, a plurality of display pages **116**, a plurality of function buttons or keys **117**, and a plurality of displays **119**.

Multiple piece body **102** of electronic book **101** typically is made by any suitable well-known material in the art, such as plastics, metals, resins, or the like, as well as being formed by any well-known method in the art, such as molding, milling, or the like. However, in a preferred embodiment of the present invention, high impact plastic materials are injection molded to form multiple piece bodies **102**. Additionally, it should be noted that surfaces of multiple piece bodies **102** are sometimes covered with a leather or a leather like material so as to simulate a leather bound book. Further, it should be understood that first hollow body **103**, second hollow body **108**, and third hollow body **112** are sometimes made of several pieces (not shown) that are assembled; however, for the sake of simplicity, these engineering details have been omitted in order to clearly present the present invention.

Electronic book **101** illustrated in FIG. **1**, is assembled with first hollow body **103** and second hollow body **108** being joined or connected to third hollow body **112**. More specifically, edge **104** of first hollow body **103** and edge **109** of hollow body **108** are hingeably joined or connected at point **124** to edges **113** and **114** of third hollow body **112**, respectively. Joining of first and second hollow bodies **103** and **108** to third hollow body **112** is achieved at point **124** by any suitable method, such as hinges or the like. It should be understood that joining of first and second hollow bodies **103** and **108** to third hollow body **112** allows for operable connection of the plurality of buttons **117**, the plurality of displays **119**, and the plurality of page displays **116** to be interfaced or interconnected to electronics, illustrated as box **130**, described hereafter.

Generally, multiple piece body **102** is designed and constructed such that electronics **130** includes a variety of electronic components, such as a Micro-Processing Unit (MPU), a memory, logic circuitry, and the like that are interconnected and fitted into multiple piece body **102**. Additionally, it should be noted that specific positioning of the various electronic components in multiple piece body **102** is application specific, thus enabling a wide range of locations for the electronic components.

The plurality of function buttons or keys are made by any suitable method, such as electromechanical, electronic or the like. The plurality of function buttons or keys **117** is located for convenient use of the; operator so as to select a variety of controls or functions, such as pagination, contrast, brightness, and volume. Additionally, a plurality of input and output connectors **117** are available for the user to couple electronic book **101** to a variety of electronic accessories (not shown), such as a telephone line, personal computer,