



G00002



159159

INTERACTIVE ELECTRONIC BOOK FETCHER AND METHOD FOR DOWNLOADING DATA THEREOF

Field of the invention

The present invention relates to an electronic book fetcher and a method
5 for downloading data thereof and, more particularly, to a method making use
of an interactive electronic book fetcher to download data and then store the
data into an electronic book card.

Background of the invention

Because conventional books are bulky and cannot be stored up for a long
10 time, a new type of reading- electronic book (eBook)- thus comes into being.
An electronic book displays book contents on a screen of an electronic
platform (e.g., a computer, a handheld computer, a PDA or an electronic book
reader) one page by another. For this type of reading, books are stored in an
electronic platform in the form of electronic files and thus can be stored up
15 and taken care of for a long time. When a user goes out, it is only necessary
for him to take a computer, a handheld computer, a PDA or an electronic
book reader matched with reading software to read books through memory
cards having electronic book data stored therein.

The electronic book contents are generally upgraded by downloading
20 electronic books through internet access. A user needs to achieve internet
access himself and connect to websites having electronic books for download.
The user then selects electronic books he wants to read according to his
interests for download. This way of downloading electronic books is very
cumbersome and inconvenient for the user so that the desired electronic
25 books cannot be downloaded quickly.

Accordingly, the present invention proposes an interactive electronic book fetcher and a method for downloading data thereof to resolve the problems in the prior art.

Summary of the invention

5 The primary object of the present invention is to provide an interactive electronic book fetcher and a method for downloading data thereof. The interactive electronic book fetcher has a compact size, and can download data through network connection. A user can input a book name he want to download by means of interactive selection, and directly store the
10 downloaded data into an electronic book card.

Another object of the present invention is to provide an interactive electronic book fetcher and a method for downloading data thereof, wherein an electronic book card is used to store an internet service provider (ISP) account and password, an electronic book server IP (internet protocol)
15 address, and an identification code so that the interactive electronic book fetcher can automatically perform the actions of dialing up, authenticating, and downloading data (book lists and contents) according to the data stored in the electronic book card after the electronic book card is inserted therein.

To achieve the above objects, the present invention provides an interactive
20 electronic book fetcher, which comprises a microprocessor, a storage unit, a network connection unit, a key unit, a liquid crystal display (LCD), and a storage card slot. The storage unit is connected with the microprocessor, and is used to store control programs and data. The network connection unit is connected with the microprocessor, and is used to achieve internet access.
25 The key unit is connected with the microprocessor. The LCD is connected

with the microprocessor, and is used to display messages. The storage card slot is also connected with the microprocessor.

To achieve the above objects, the present invention also provides a method for downloading data of an interactive electronic book fetcher. The interactive electronic book fetcher comprises a microprocessor, a storage unit, a network connection unit, a key unit, a liquid crystal display (LCD), and a storage card slot. The storage unit is connected with the microprocessor, and is used to store data. The network connection unit is connected with the microprocessor. The key unit is connected with the microprocessor. The LCD is connected with the microprocessor. The storage card slot is also connected with the microprocessor, and is used for insertion of an electronic book card. The method for downloading data comprises the following steps:

- (a) The electronic book card is inserted into the interactive electronic book fetcher.
- (b) The interactive electronic book fetcher connects to an electronic book server IP address stored in the electronic book card through the network connection unit.
- (c) Data representing a book to be downloaded are inputted through the key unit.
- (d) The book is downloaded into the electronic book card from the electronic book server IP address.

The various objects and advantages of the present invention will be more readily understood from the following detailed description when read in conjunction with the appended drawing, in which:

Brief description of the drawings:

Fig. 1 is a circuit block diagram of an interactive electronic book fetcher of the present invention; and

Fig. 2 is a flowchart showing how an interactive electronic book fetcher of the present invention downloads book data into an electronic book card.

5 Detailed description of the preferred embodiments

As shown in Fig. 1, an interactive electronic book fetcher comprises a microprocessor 11, a storage unit 12, a network connection unit 13, a plurality of storage card slots 14 (e.g., CompactFlash slots), a transmission line slot 15, a key unit 16, and a liquid crystal display 17. The storage unit 12
10 is connected with the microprocessor 11, and comprises a flash memory 121 used to store control programs and a static random access memory (SRAM) 122 used to store data temporarily. The network connection unit 13 is connected with the microprocessor 11, and is used to achieve internet access. The network connection unit 13 comprises a modem 131 and a network card
15 132. The storage card slots 14 are connected with the microprocessor 11, and are used to store downloaded data into a plurality of electronic book cards 18, respectively. The transmission line slot 15 is connected with the microprocessor 11. The key unit 16 is connected with the microprocessor 11, and includes the key functions of a page-up key, a page-down key, a cancel
20 key, and function keys. The liquid crystal display 17 is also connected with the microprocessor 11.

When the interactive electronic book fetcher in Fig. 1 is used, it connects to a database center to download data via a telephone line or a network line through the modem 131 or the network card 132 of the network connection
25 unit 13. Data stored in the database center are electronic book lists and

electronic book contents made by several publishers to be downloaded by users. Data downloaded from the database center are stored into the electronic book cards 18, which are inserted into the storage card slots 14. During the downloading process of data, related messages (e.g., the rate of downloading progress and the status of point use of the electronic book cards) are displayed on the liquid crystal display 17. The transmission line slot 15 can be connected to an external electronic device via a transmission line (not shown) to refresh the control programs stored in the flash memory 121,

Each of the electronic book cards 18 is a memory card, and adopts a safety authentication payment mechanism. The electronic book card 18 stores an ISP account and password for logging in the Internet, an electronic book server IP address (i.e., a fully qualify domain name used to connect to the database center of online publishers), and a unique identification code for login and authentication of a publisher number and serial number. After the electronic book cards 18 achieve internet access to log in and be authenticated, each of them has a certain amount of use points for downloading data.

As shown in Fig. 2, the method of downloading book data of the interactive electronic book fetcher of the present invention comprises the following steps:

Step 31: The electronic book card 18 is inserted into the storage card slot 14. It is feasible that only an electronic book card 18 is inserted to access book data or several electronic book cards 18 are inserted to access different book data simultaneously.

Step 32: The interactive electronic book fetcher achieves internet access

via a telephone line or a network line through the modem 131 or the network card 13, and connects to the electronic book server IP address stored in the electronic book card 18, hence preparing for downloading book data from the database center of the online publishers.

5 Step 33: The electronic book card 18 is authenticated and the status of point use of the electronic book card is displayed on the liquid crystal display 17.

34: A user inputs data (e.g., book title and data number) representing a book to be downloaded through the key unit 16. If several electronic book cards 18
10 are inserted into the storage card slots 14, several pieces of data representing books are inputted in order for each electronic book card 18, respectively.

35: Whether the electronic book card 18 still has any point to be subtracted for downloading books is determined. If the answer is positive, Step 36 is jumped to; otherwise, this flowchart is ended.

15 36: The selected book is downloaded into the electronic book card 18 from the database center.

37: The rate of downloading progress is displayed on the liquid crystal display 17 during downloading process of data.

38: The number of remaining points of the electronic book card 18 is
20 displayed on the liquid crystal display 17 after download of data is finished, and this flowchart is then ended.

In Step 35, because each electronic book card 18 stores a unique identification code and has a certain amount of use points, when a user downloads data from the online database center each time, the number of
25 points of the electronic book card 18 will be subtracted according to the

amount of downloaded data or the number of downloaded items.

Therefore, the interactive electronic book fetcher can download book data of the database center of online publishers into the electronic book cards 18 so that the user can easily and quickly download the demanded electronic book contents. The interactive electronic book fetcher has the functions of data accumulation (e.g., storing the downloaded data into the electronic book cards 18), information exchange (e.g., exchanging data stored in the electronic book cards 18), and knowledge dispatch (e.g., connecting to database centers of different groups to download different data). The user can then insert the electronic book cards 18 with electronic book data stored therein into an electronic book reader for reading.

To sum up, the interactive electronic book fetcher and the method for downloading data thereof of the present invention has the following characteristics.

(1) As compared to a computer, the interactive electronic book fetcher is compact and has a high portability, and can achieve internet access via a telephone line or a network line to download electronic book lists and contents.

(2) The download operation is simple. It is not necessary for a user to set related parameters (e.g., an ISP account and password, an electronic book server IP address, and so on) himself. He only needs to insert the electronic book cards into the electronic book fetcher to automatically accomplish the actions of dialing up, authenticating, and downloading.

Although the present invention has been described with reference to the

preferred embodiment thereof, it will be understood that the invention is not limited to the details thereof. Various substitutions and modifications have been suggested in the foregoing description, and other will occur to those of ordinary skill in the art. Therefore, all such substitutions and modifications
5 are intended to be embraced within the scope of the invention as defined in the appended claims.

I claim:

1. An interactive electronic book fetcher comprising:
 - a microprocessor;
 - a storage unit connected with said microprocessor and used to store at least
 - 5 one control program and data;
 - a network connection unit connected with said microprocessor and used to achieve internet access;
 - a key unit connected with said microprocessor;
 - a liquid crystal display connected with said microprocessor and used to
 - 10 display messages; and
 - a plurality of storage card slots connected with said microprocessor.
2. The interactive electronic book fetcher as claimed in claim 1, wherein said storage unit comprises a flash memory and a static random access memory.
3. The interactive electronic book fetcher as claimed in claim 1, wherein said
- 15 network connection unit is a modem.
4. The interactive electronic book fetcher as claimed in claim 1, wherein said network connection unit is a network card.
5. The interactive electronic book fetcher as claimed in claim 1, wherein said storage card slots are CompactFlash slots.
- 20 6. The interactive electronic book fetcher as claimed in claim 1 further comprising a transmission line slot, which is connected with said microprocessor and used to refresh said control programs.
7. An interactive electronic book fetcher used for insertion of a plurality of electronic book cards and achieving internet access to download data into
- 25 said electronic book cards, said interactive electronic book fetcher

comprising:

a microprocessor;

a storage unit connected with said microprocessor and used to store at least one control program and data;

5 a network connection unit connected with said microprocessor and used to be achieve internet access;

a key unit connected with said microprocessor;

a liquid crystal display connected with said microprocessor and used to display messages; and

10 a plurality of storage card slots connected with said microprocessor and used for insertion of said electronic book cards.

8. The interactive electronic book fetcher as claimed in claim 7, wherein said storage unit comprises a flash memory and a static random access memory.

9. The interactive electronic book fetcher as claimed in claim 7, wherein said
15 network connection unit is a modem.

10. The interactive electronic book fetcher as claimed in claim 7, wherein said network connection unit is a network card.

11. The interactive electronic book fetcher as claimed in claim 7, wherein said storage card slots are CompactFlash slots.

20 12. The interactive electronic book fetcher as claimed in claim 7 further comprising a transmission line slot, which is connected with said microprocessor and used to refresh said control programs.

13. The interactive electronic book fetcher as claimed in claim 7, wherein said electronic book card is used for storing an ISP account and password,
25 an electronic book server IP address, and an identification code for login

and authentication of a publisher number and serial number.

14. The interactive electronic book fetcher as claimed in claim 7, wherein said electronic book cards are memory cards.

15. A method for downloading data of an interactive electronic book fetcher,
5 said interactive electronic book fetcher comprising a microprocessor, a storage unit connected with said microprocessor and used to store data, a network connection unit connected with said microprocessor, at least a storage card slot connected with said microprocessor, a key unit connected with said microprocessor, and a liquid crystal display connected with said
10 microprocessor, said storage card slot being used for insertion of at least an electronic book card, said method comprising the steps of:

(a) inserting said electronic book card into said storage card slot;

(b) connecting said interactive electronic book fetcher to an electronic book server IP address stored in said electronic book card through said
15 network connection unit;

(c) inputting data representing a book to be downloaded through said key unit; and

(d) downloading said book into said electronic book card from said electronic book server IP address.

20 16. The method for downloading data of an interactive electronic book fetcher as claimed in claim 15, wherein said storage unit comprises a flash memory and a static random access memory.

17. The method for downloading data of an interactive electronic book fetcher as claimed in claim 15, wherein said network connection unit is a
25 network card.

18. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 15, wherein said network connection unit is a
modem.
19. The method for downloading data of an interactive electronic book
5 fetcher as claimed in claim 15, wherein said storage card slot is a
CompactFlash slot.
20. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 15, wherein said interactive electronic book
fetcher further comprises a transmission line slot connected with said
10 microprocessor.
21. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 15, wherein said electronic book card further
stores an ISP account and password and an identification code for login and
authentication of a publisher number and serial number.
- 15 22. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 15, wherein said network connection unit
achieves internet access via a telephone line or a network line in said Step
(b).
23. The method for downloading data of an interactive electronic book
20 fetcher as claimed in claim 15 further comprising a step of authenticating
said electronic book card and displaying the status of point use of said
electronic book card before said Step (c).
24. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 15 further comprising a step (e) of displaying a
25 message that book contents are being fetched and the rate of downloading

progress on said liquid crystal display after said Step (d).

25. The method for downloading data of an interactive electronic book
fetcher as claimed in claim 24 further comprising a step of displaying the
number of remaining points of said electronic book card on said liquid
5 crystal display after download of book content data is finished after said
Step (e).