



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 electronic book fetcher to download data (e.g., book lists and contents)
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 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 electronic book fetcher and a method for downloading data thereof. The electronic book fetcher has a compact size, and can download data through network connection and directly store the downloaded data into an electronic book card.

10 Another object of the present invention is to provide an 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) address, and an identification code so that the electronic book fetcher can automatically
15 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 thereinto.

To achieve the above objects, the present invention provides an electronic book fetcher, which comprises a microprocessor, a storage unit, a network
20 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. The key unit is connected with the microprocessor. The LCD is connected with the
25 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 electronic book fetcher. The 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 storage card slot.
- (b) The electronic book fetcher connects to an electronic book server IP address stored in the electronic book card through the network connection unit.
- (c) Book list data of publishers are downloaded into the electronic book card from the electronic book server IP address.
- (d) The electronic book card is taken out from the electronic book fetcher and then inserted into an electronic book reader.
- (e) Books to be downloaded are selected in the downloaded book list data of the electronic book card through the electronic book reader.
- (f) The electronic book card having the record of books to be downloaded is inserted into the storage card slot.
- (g) The electronic book fetcher connects to the electronic book server IP address stored in the electronic book card.

(h) Book content data of publishers are 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 electronic book fetcher of the present invention;

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

Fig. 3 is a connection diagram of the present invention showing that an electronic book card having the record of books to be downloaded is inserted into an electronic book reader; and

Fig. 4 is a flowchart showing how an electronic book fetcher of the present invention downloads book contents into an electronic book card.

Detailed description of the preferred embodiments

As shown in Fig. 1, an electronic book fetcher comprises a microprocessor 11, a storage unit 12, a network connection unit 13, a storage card slot 14 (e.g., a CompactFlash slot), a transmission line slot 15, a key unit 16, and a liquid crystal display 17. The storage unit 12 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 132. The

storage card slot 14 is connected with the microprocessor 11, and is used to store downloaded data into an electronic book card 18. 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 key, and function keys. The liquid crystal display 17 is also connected with the microprocessor 11.

When the 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 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 card 18, which is inserted into the storage card slot 14. During download process of data, related messages (e.g., the rate of downloading progress and the status of point use of the electronic book card) 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,

The above electronic book card 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 card 18 achieves internet access to log in and be

authenticated, it has a certain amount of use points for downloading data.

As shown in Fig. 2, the method of downloading book lists of the present invention comprises the following steps:

Step 31: The electronic book card 18 is inserted into the storage card slot
5 14 so that the electronic book fetcher in Fig. 1 can store the downloaded data into the electronic book card 18 and execute the function key in the key unit 16 to switch to the function of taking book lists.

Step 32: The electronic book fetcher achieves internet access via a telephone line or a network line through the modem 131 or the network card
10 13, and connects to the electronic book server IP address stored in the electronic book card 18, hence preparing for downloading book list data from the database center of the online publishers.

Step 33: The electronic book card 18 is authenticated and the status of point use of the electronic book card is displayed.

15 Step 34: Whether the electronic book card 18 still has points for use to be subtracted when downloading book list data is determined. If the answer is positive, Step 35 is jumped to; otherwise, this flowchart is ended.

Step 35: Book lists of the database center are downloaded into the electronic book card 18, and the message that book lists are being fetched is
20 displayed on the liquid crystal display 17.

Step 36: After download of book lists is finished, the number of remaining points of the electronic book card 18 is displayed on the liquid crystal display 17, and this flowchart is then ended.

In Step 34, because each electronic book card 18 stores a unique
25 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 points of the electronic book card 18 will be subtracted according to the amount of downloaded data or the number of downloaded items.

As shown in Fig. 3, after the electronic book card 18 finishes the steps shown in Fig. 2, book list data are stored in the electronic book card 18. The user thus can take the electronic book card 18 out of the electronic book fetcher in Fig. 1 and then inserts the electronic book card 18 into an electronic book reader 19 capable of reading the content of the electronic book card 18. Through the electronic book reader 19, the book lists stored in the electronic book card 18 can be read to select books to be downloaded, and the record of the books to be downloaded will be stored in the electronic book card 18.

As shown in Fig. 4, the method for downloading book contents of the present invention comprises the following steps:

Step 41: The electronic book card 18 having the record of the books to be downloaded is inserted into the storage card slot 14 so that the electronic book fetcher in Fig. 1 can store the downloaded data into the electronic book card 18 and execute the function key in the key unit 16 to switch to the function of taking book contents.

Step 42: The 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 content data from the database center of the online publishers.

Step 43: The electronic book card 18 is authenticated and the status of point use of the electronic book card is displayed.

Step 44: Whether the electronic book card 18 still has points for use to be subtracted when downloading book content data is determined. If the answer is positive, Step 45 is jumped to; otherwise, this flowchart is ended.

Step 45: Book contents of the database center are downloaded into the electronic book card 18, and the message that book contents are being fetched and the rate of downloading progress are displayed on the liquid crystal display 17.

Step 46: After download of book contents is finished, the number of remaining points of the electronic book card 18 is displayed on the liquid crystal display 17, and this flowchart is then ended.

Therefore, the electronic book fetcher can download book lists and book contents of the database center of online publishers into the electronic book card 18 so that the user can easily and quickly download the demanded electronic book contents. The electronic book fetcher has the functions of data accumulation (e.g., storing the downloaded data into the electronic book card 18), information exchange (e.g., exchanging data stored in the electronic book card 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 card 18 with electronic book data stored therein into the electronic book reader 19 for reading.

To sum up, the 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 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 card 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 are intended to be embraced within the scope of the invention as defined in the appended claims.

I claim:

1. An 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 storage card slot connected with said microprocessor.
2. The electronic book fetcher as claimed in claim 1, wherein said storage unit comprises a flash memory and a static random access memory.
3. The electronic book fetcher as claimed in claim 1, wherein said network
- 15 connection unit is a modem.
4. The electronic book fetcher as claimed in claim 1, wherein said network connection unit is a network card.
5. The electronic book fetcher as claimed in claim 1, wherein said storage card slot is a CompactFlash slot.
- 20 6. The 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 electronic book fetcher used for insertion of an electronic book card and achieving internet access to download data into said electronic book
- 25 card, said electronic book fetcher comprising:

a microprocessor;
a storage unit connected with said microprocessor and used to store at least one control program and data;
a network connection unit connected with said microprocessor and used to
5 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
a storage card slot connected with said microprocessor and used for
10 insertion of said electronic book card.

8. The electronic book fetcher as claimed in claim 7, wherein said storage unit comprises a flash memory and a static random access memory.
9. The electronic book fetcher as claimed in claim 7, wherein said network connection unit is a modem.
- 15 10. The electronic book fetcher as claimed in claim 7, wherein said network connection unit is a network card.
11. The electronic book fetcher as claimed in claim 7, wherein said storage card slot is a CompactFlash slot.
12. The electronic book fetcher as claimed in claim 7 further comprising a
20 transmission line slot, which is connected with said microprocessor and used to refresh said control programs.
13. The electronic book fetcher as claimed in claim 7, wherein said electronic book card is used for storing an ISP account and password, an electronic book server IP address, and an identification code for login and
25 authentication of a publisher number and serial number.

14. The electronic book fetcher as claimed in claim 7, wherein said electronic book card is a memory card.
15. A method for downloading data of an electronic book fetcher, said electronic book fetcher comprising a microprocessor, a storage unit
5 connected with said microprocessor and used to store data, a network connection unit connected with said microprocessor, a storage card slot connected with said microprocessor, a key unit connected with said microprocessor, and a liquid crystal display connected with said microprocessor, said storage card slot being used for insertion of an
10 electronic book card, said method comprising the steps of:
- (a) inserting said electronic book card inserted into said storage card slot;
 - (b) connecting said electronic book fetcher to an electronic book server IP address stored in said electronic book card through said network connection unit;
 - 15 (c) downloading book list data of publisher into said electronic book card from said electronic book server IP address;
 - (d) taking said electronic book card out from said electronic book fetcher and then inserting said electronic book card into an electronic book reader;
 - 20 (e) selecting books to be downloaded in the downloaded book list data of said electronic book card through said electronic book reader;
 - (f) inserting said electronic book card having the record of books to be downloaded into said storage card slot;
 - (g) connecting said electronic book fetcher to said electronic book server
25 IP address stored in said electronic book card; and

(h) downloading book content data of publisher into said electronic book card from said electronic book server IP address.

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

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

19. The method for downloading data of an electronic book fetcher as claimed in claim 15, wherein said storage card slot is a CompactFlash slot.

20. The method for downloading data of an electronic book fetcher as claimed in claim 15, wherein said key unit determines whether said book list data or said book content data are to be selected.

21. The method for downloading data of an electronic book fetcher as claimed in claim 15, wherein said electronic book fetcher further comprises a transmission line slot connected with said microprocessor.

22. The method for downloading data of an 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.

23. The method for downloading data of an electronic book fetcher as claimed in claim 15, wherein said electronic book card is a memory card.

24. The method for downloading data of an 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).

25. The method for downloading data of an electronic book fetcher as claimed in claim 15 further comprising a step of authenticating said
5 electronic book card and displaying the status of point use of said electronic book card before said Step (c).

26. The method for downloading data of an electronic book fetcher as claimed in claim 15 further comprising a step of displaying a message that book lists are being fetched on said liquid crystal display after said Step (c).

10 27. The method for downloading data of an electronic book fetcher as claimed in claim 15 further comprising a Step (i) of displaying a message that book contents are being fetched and a rate of downloading progress on said liquid crystal display after said Step (h).

15 28. The method for downloading data of an electronic book fetcher as claimed in claim 27 further comprising a step of displaying the number of remaining points of said electronic book card on said liquid crystal display after download of book content data is finished after said Step (i).