



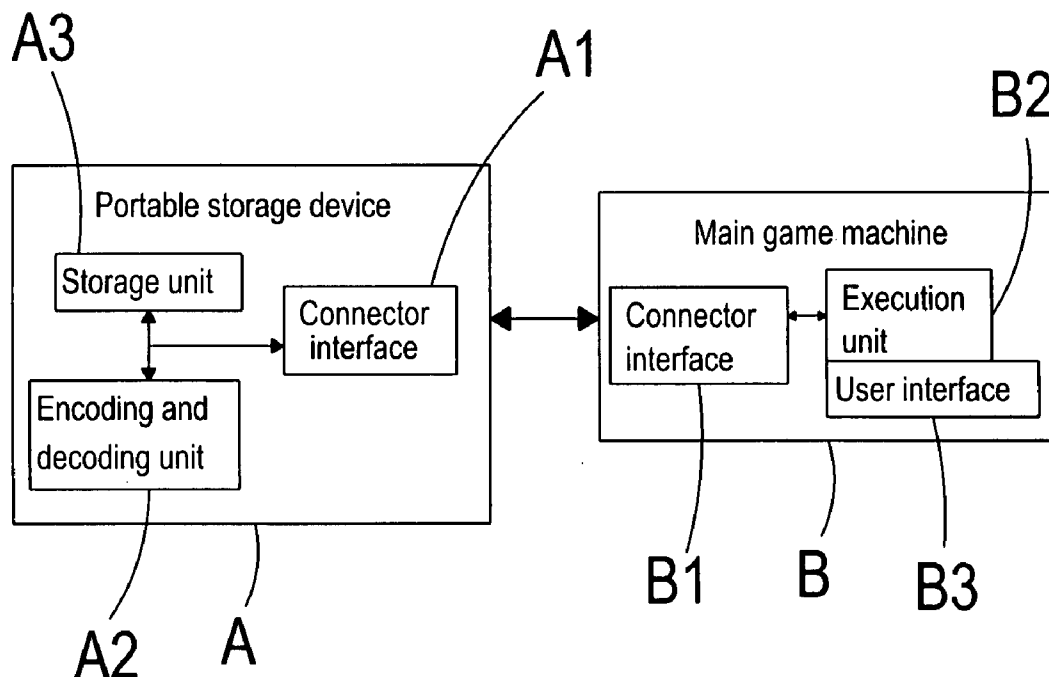
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(19) **United States**(12) **Patent Application Publication**
Lin(10) **Pub. No.: US 2010/0292012 A1**(43) **Pub. Date: Nov. 18, 2010**(54) **PORTABLE STORAGE DEVICE FOR A GAME
MACHINE TO MOUNT GAMES**(52) **U.S. Cl. 463/44**(76) **Inventor: Pao-Chen Lin**, Jhudong Township
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A63F 9/24 (2006.01)(57) **ABSTRACT**

The present invention relates to a portable storage device for a game machine to mount games, which includes a portable storage device and a main game machine. The main game machine and the portable storage device are provided with mutual coupling connector interfaces. The connector interface of the portable storage device is further configured with an encoding and decoding unit, which enables processing and transmitting of game files within the portable storage device to the main game machine, after which an execution unit of the main game machine executes the game files and produces an operable user interface, thereby effectively increasing memory capacity of the main game machine. In accordance with such means, the game files of the portable storage device can be mounted on the user interface.



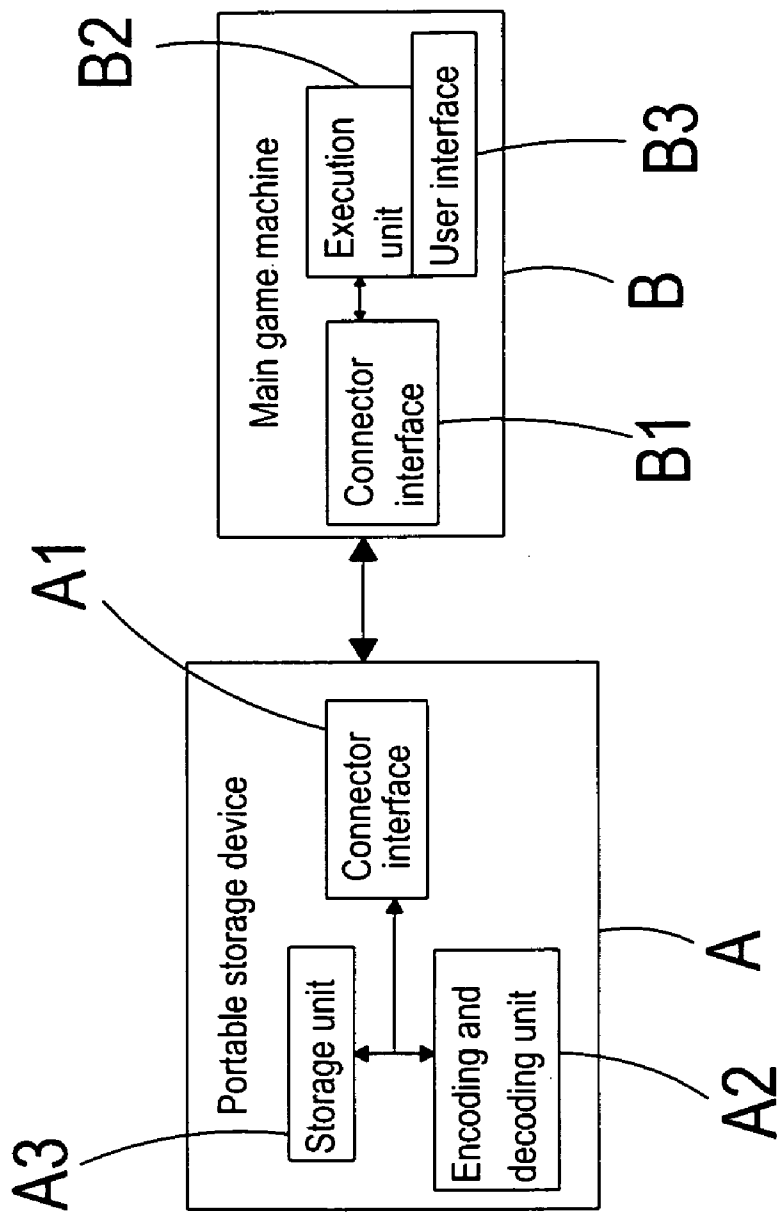


Fig.1

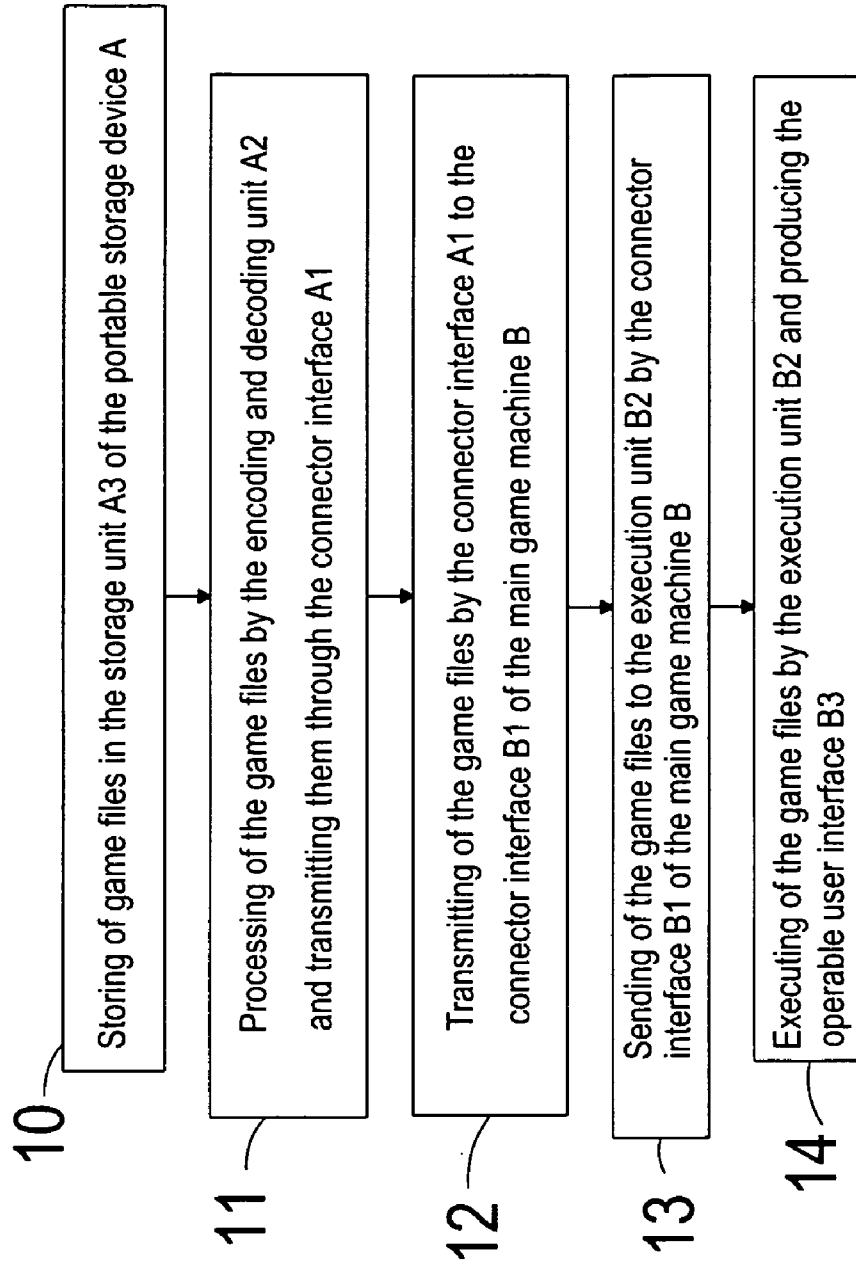


Fig.2

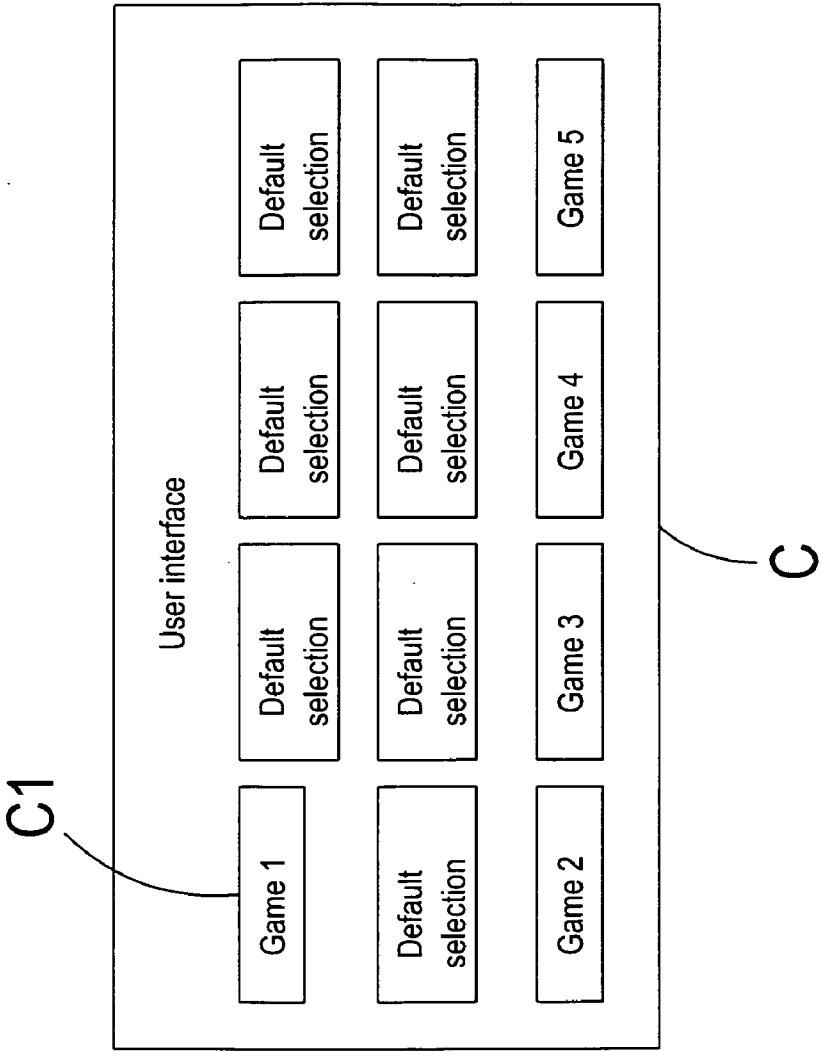


Fig.3

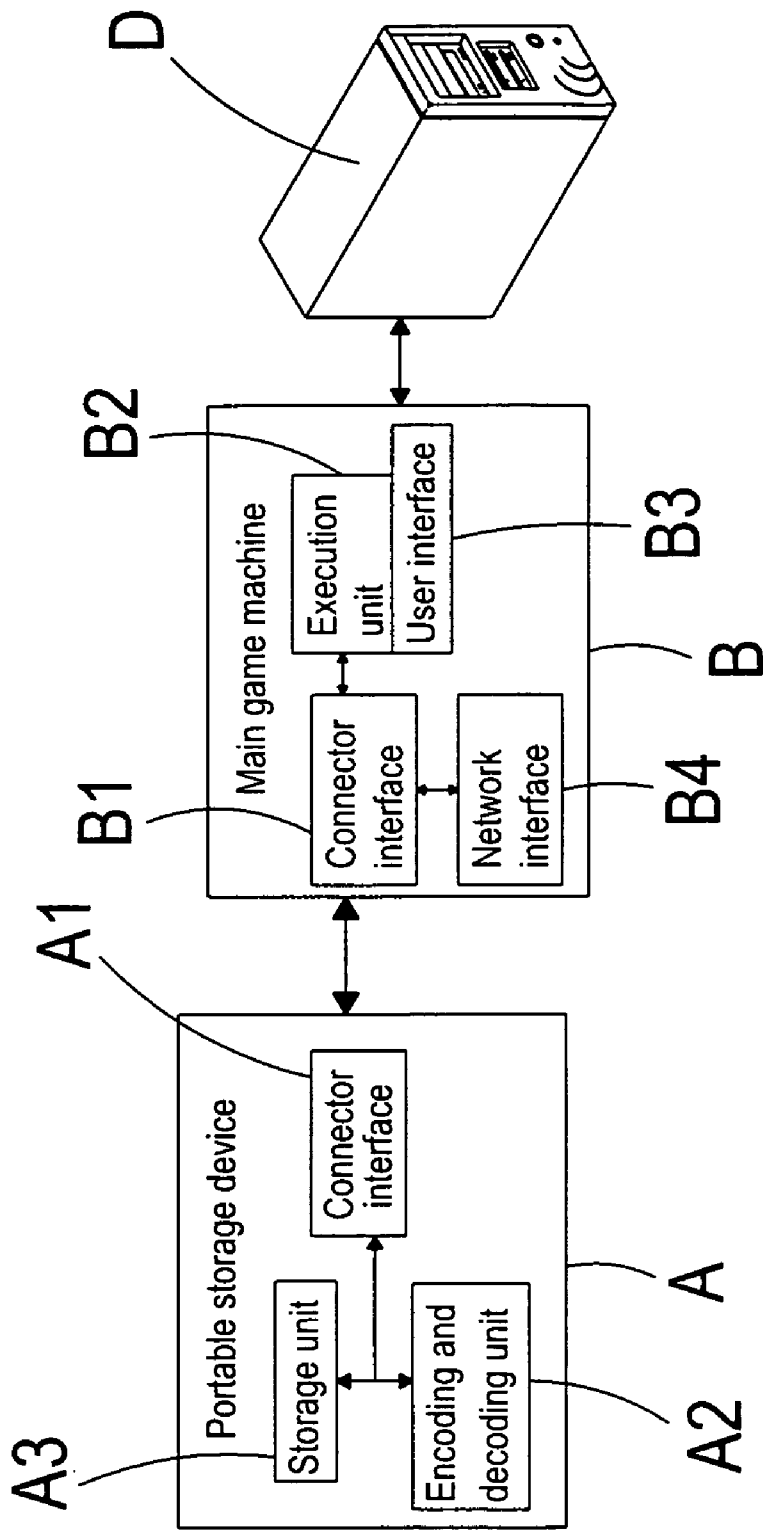


Fig.4

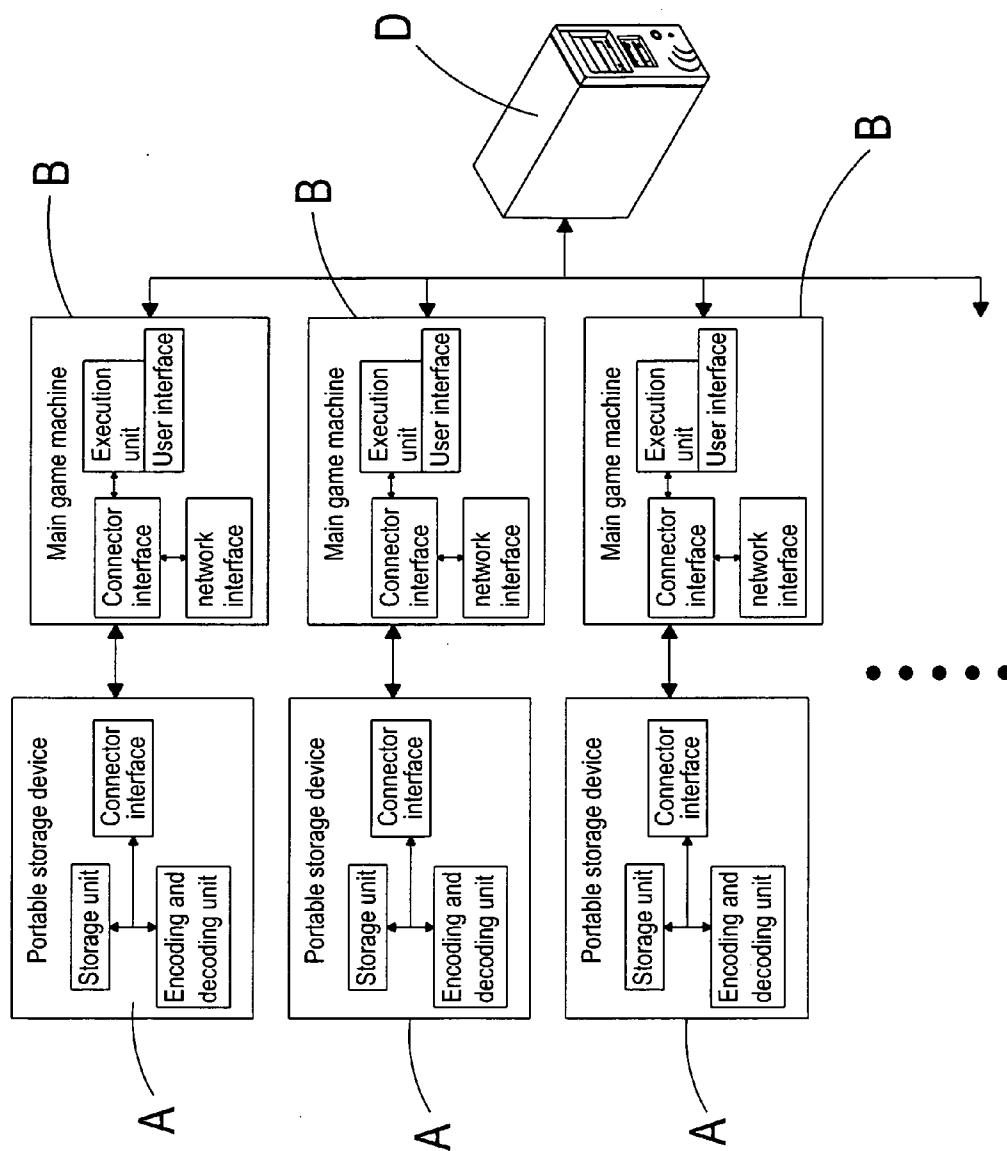


Fig.5

PORTABLE STORAGE DEVICE FOR A GAME MACHINE TO MOUNT GAMES

BACKGROUND OF THE INVENTION

[0001] (a) Field of the Invention

[0002] The present invention provides a portable storage device, and more particularly to a portable storage device for a game machine to mount games, in which game files stored within a portable storage device are transmitted to a main game machine through an encoding and decoding unit, and the game files within the portable storage device can be mounted on a user interface.

[0003] (b) Description of the Prior Art

[0004] Technological progress has brought about a transformation in many leisure and entertainment industries, with television amusement machines and computer games being particularly prominent examples of such.

[0005] The massive, large-scale amusement machines installed within the so-called amusement places of early times required the consumer to drop coins or tokens into the large-scale amusement machines in order to operate the game controls. However, the large-scale machines operated independent of each other, thereby preventing inter-machine gaming between the large-scale amusement machines.

[0006] Later, with the advancement in network technology, in the early stages, computer games on the same large-scale amusement machines enabled online inter-machine gaming competition via the Internet or a local-area network. Hence, the traditional amusement places were compelled to reform, and the large-scale amusement machines were replaced with large personal computers, and the consumer was able to purchase computer usage time in the amusement place (now generally known as an Internet Cafe). Within the usage time, users could play competitive games on the local-area network, execute online Internet games, access the Internet and browse for information, and so on, via the personal computer. The Internet Cafe has now already become a place for many people to get together during leisure time for the simple reason that although the Internet is convenient, however, effectiveness to provide a receptive experience and have a good time together is not apparent when playing online games with friends via the Internet at home, and hence the discernible prevalence of Internet Coffee shops.

[0007] However, to contend with the Internet Cafe operators, many early so-called television amusement machine suppliers further developed television amusement machines with control functions, acousto-optic effects and fine detailed gaming that surpassed personal computers. For example: the XBOX and XBOX 360 marketed by Microsoft, the PS3 marketed by Sony, the WII marketed by Nintendo, and the like, caused fierce competition between computer games and television amusement machines.

[0008] Although the control functions, acousto-optic effects and fine detailed gaming of the television amusement machines surpassed the personal computer, and they enabled inter-machine online gaming with other television amusement machines having the same specifications via the Internet, however, the television amusement machines along with the early computer games have corresponding shortcomings, namely that the multi-player entertainment experience and effectiveness of multiple people having a good time together is not apparent. Furthermore, price of the television amusement machines is high and game software is expensive, thus, not everyone is willing to spend their leisure and entertain-

ment expenditure on the television amusement machines. Furthermore, general television amusement machines have the annoyance of having to place a CD (Compact Disk) into the machine, moreover, internal storage space of the television amusement machines is too small, and is only able to store game records.

[0009] Hence, it is the strong desire of the inventor and suppliers of related products and purpose of the present invention to overcome existent technical difficulties to provide the technology to enable consumers to simultaneously operate television amusement machines while at the same time enabling multi-player entertainment in public places, and resolve the problem of insufficient capacity of the television amusement machine to achieve enabling online updating and online connection.

SUMMARY OF THE INVENTION

[0010] Hence, in light of the shortcomings of the aforementioned prior art, the inventor of the present invention, having collected related data, and through evaluation and consideration from many aspects, as well as having accumulated years of experience in related arts, through continuous testing and improvements has designed a portable storage device for a game machine to mount games which enables game files stored within a portable storage device to be transmitted to a main game machine through an encoding and decoding unit, and enables the game files within the portable storage device to be mounted on a user interface.

[0011] A primary objective of the present invention is to store game files within a storage unit of the portable storage device, and enable the game files to be processed using the encoding and decoding unit and transmitted through a connector interface of the portable storage device to a connector interface of the main game machine. The connector interface of the main game machine sends the game files to an execution unit, which executes the game files and produces an operable user interface, whereby problems of the television amusement machines of the prior art having insufficient capacity and the inability to achieve online updating and online connection are overcome, and thus achieves effectiveness to enable the game files of the portable storage device to be mounted on the user interface of the main game machine.

[0012] To enable a further understanding of said objectives and the technological methods of the invention herein, a brief description of the drawings is provided below followed by a detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 shows a block diagram of a preferred embodiment according to the present invention.

[0014] FIG. 2 shows a flow chart of the preferred embodiment according to the present invention.

[0015] FIG. 3 shows a schematic view of a user interface of the preferred embodiment according to the present invention.

[0016] FIG. 4 shows an implementation schematic view of the preferred embodiment according to the present invention.

[0017] FIG. 5 shows an implementation schematic view 1 of the preferred embodiment according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0018] Referring to FIG. 1, which shows a block diagram of a preferred embodiment of the present invention, and it can be

seen from the drawing that a portable storage device for a game machine to mount games of the present invention is structured to comprise a portable storage device A and a main game machine B.

[0019] The portable storage device A is provided with a connector interface A1, and the connector interface A1 is further connected to an encoding and decoding unit A2 and a storage unit A3. The storage unit A3 is able to store game files, and processing and transmitting of the game files are implemented using the encoding and decoding unit A2.

[0020] The main game machine B is provided with a connector interface B1 and an execution unit B2, and the connector interface B1 is coupled to the connector interface A1 of the portable storage device A. Moreover, the connector interface B1 is further connected to the execution unit B2, and the execution unit B2 executes the game files and produces an operable user interface B3.

[0021] The connector interfaces A1, B1 of the portable storage device A and main game machine B can be either USB (Universal Serial Bus) ports, RS-454 ports, IEEE 1394 (Institute of Electrical and Electronics Engineers) interfaces, SERIAL ATA (Advanced Technology Attachment) interfaces or high speed signal transmission connector interfaces which interconnect by means of a plug and socket. And the portable storage device A can be either a flash drive, a MMC card (Multi Media Card), a SD card (Secure Digital card), a Mini SD, a CF card (Compact Flash card), a MS card (Memory Stick card) or a portable storage device able to store game files.

[0022] The main game machine B can be either an XBOX, an XBOX 360, a PS2, a PS3, a WII or a N64, or a game machine able to connect to a television, including a television, a plasma television, a liquid crystal television, and the like.

[0023] Furthermore, the encoding and decoding unit A2 can be either a hardware form of an integrated circuit, a programmed integrated circuit, in the form of a firmware in flash memory or in the form of software installed on a hard disk.

[0024] Referring to FIGS. 1, 2 and 3, which show the block diagram, a flow chart and a schematic view of a user interface respectively of the preferred embodiment according to the present invention, and it can be seen from the drawings that the main game machine B executes games mounted from the portable storage device A according to the following steps:

[0025] (10) Storing of game files in the storage unit A3 of the portable storage device A;

[0026] (11) Processing of the game files by the encoding and decoding unit A2 and transmitting them through the connector interface A1;

[0027] (12) Transmitting of the game files by the connector interface A1 to the connector interface B1 of the main game machine B;

[0028] (13) Sending of the game files to the execution unit B2 by the connector interface B1 of the main game machine B;

[0029] (14) Executing of the game files by the execution unit B2 and producing the operable user interface B3.

[0030] When executing the aforementioned steps, the game files stored in the storage unit A3 within the portable storage device A are supplied to the execution unit B2 of the main game machine B for reading and executing thereof, whereby when the portable storage device A is transmitting the game files to the main game machine B, the encoding and decoding unit A2 of the portable storage device A first completes pro-

cessing of the game files, and after the encoding and decoding unit A2 has completed encoding and decoding of the game files, then the game files are transmitted to the connector interface B1 of the main game machine B through the connector interface A1, whereupon the game files are transmitted to the execution unit B2, thereby enabling the execution unit B2 to execute the game files, and produce the operable user interface B3, which is simultaneously displayed on a peripheral device C of the main game machine B, thereby enabling the peripheral device C to produce a user interface C1, at which time the portable storage device A is mounted on the user interface B3 of the main game machine B, and thus effectively increasing memory capacity of the main game machine B. In accordance with such means, the game files of the portable storage device A can be mounted on the user interface B3, and enables the operable user interface B3 to be controlled through selection operations using the user interface C1 of the peripheral device C, thereby enabling the main game machine B to load the game files within the portable storage device A according to the selection operation on the user interface C1.

[0031] Referring to FIGS. 2, 3, 4 and 5, which show the flow chart, the schematic view of the user interface, an implementation schematic view and an implementation schematic view 1 respectively of the preferred embodiment according to the present invention, wherein the main game machine B can be internally provided with a network interface B4, which enables connection to a server D provided with a plurality of updated data related to the game files, and the updated data can be downloaded using the network interface B4 of the main game machine B for updating of the game files, whereby the updated data is read into and stored in the storage unit A3 of the portable storage device A through the connector interface B1 of the main game machine B, and when the network interface B4 wants to download the updated data from the server D, then a selection operation is carried out on the user interface C1. After the selection operation on the user interface C1 is completed, then the main game machine B simultaneously detects that the corresponding user interface B3 has been selected, thereby enabling the execution unit B2 to execute the game file selected on the user interface B3 and search for the updated data related to the game file on the server D and implement downloading and updating thereof. Moreover, the updated data is stored to the game files of the portable storage device A via the connector interface B1 of the main game machine B, at which time the server D is mounted on the user interface B3 of the main game machine B, thereby enabling the updated data of the server D to be mounted according to the selection operation on the user interface B3, and enabling storing the updated data to the game files of the portable storage device A. Furthermore, the server D enables simultaneous connection to two or more than two of the main game machines B, and execution of the same game file, thereby facilitating convenient public use, as well as adding a multi-dimensional aspect to the game files and convenience of use thereof.

[0032] Hence, referring to all the drawings, when in use, the present invention has the following advantages compared to the prior art:

[0033] 1. Game files stored within the storage unit A3 are processed using the encoding and decoding unit A2, after which the game files are transmitted to the connector interface B1 of the main game machine B through the connector interface A1, whereupon the game files are sent to the execution

unit B2, where they are executed and the operable user interface B3 is produced, thereby achieving mounting the portable storage device A on the user interface of B3 of the main game machine B, and effectively increasing memory capacity of the main game machine B. In accordance with such means, the game files of the portable storage device A can be mounted on the user interface B3.

[0034] 2. The main game machine B can simultaneously connect to the predetermined server D through the network interface B4 to download a plurality of updated data related to the game files from within the server D via the network interface B4, and when downloading the updated data via the network interface B4, the updated data is read into and stored within the storage unit A3 of the portable storage device A via the connector interface B1 of the main game machine B, thereby enabling the execution unit B2 to execute the game file selected on the user interface B3 and simultaneously search the server D for updated data related to the game file via the network interface B4. After having found the updated data related to the game file, the updated data can be downloaded to implement updating of the game file.

[0035] In conclusion, the portable storage device for a game machine to mount games of the present invention is clearly able to achieve effectiveness and objectives when in use, and is indeed a practical and exceptional invention that complies with the essential elements as required for a new patent application. Accordingly, a new patent application is proposed herein.

[0036] It is of course to be understood that the embodiments described herein are merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims.

What is claimed is:

1. A portable storage device for a game machine to mount games, comprising:

a portable storage device provided with a connector interface, the connector interface is respectively connected to an encoding and decoding unit and a storage unit, the storage unit is able to store game files, and game files are supplied to, the encoding and decoding unit for processing and transmitting thereof;

a main game machine provided with a connector interface which is coupled to the connector interface of the portable storage device and receives game files therefrom, the connector interface is connected to an execution unit, and the execution unit executes the game files and produces an operable user interface.

2. The portable storage device for a game machine to mount games according to claim 1, wherein the main game

machine is provided with a network interface connected to a predetermined server to enable downloading to the main game machine updated data related to game files, and the updated data is read into and stored to the game files of the portable storage device.

3. The portable storage device for a game machine to mount games according to claim 2, wherein the server is connected to two or more than two of the main game machines.

4. The portable storage device for a game machine to mount games according to claim 1, wherein the connector interfaces of the portable storage device and the main game machine are either USB (Universal Serial Bus) ports, RS-454 ports, IEEE 1394 (Institute of Electrical and Electronics Engineers) interfaces, SERIAL ATA (Advanced Technology Attachment) interfaces or high speed signal transmission connector interfaces which interconnect by means of a plug and socket.

5. The portable storage device for a game machine to mount games according to claim 1, wherein the main game machine is either an XBOX, an XBOX 360, a PS2, a PS3, a WII or a N64, or a game machine able to connect to a television.

6. The portable storage device for a game machine to mount games according to claim 1, wherein the portable storage device is either a flash drive, a MMC card (Multi Media Card), a SD card (Secure Digital card), a Mini SD, a CF card (Compact Flash card), a MS card (Memory Stick card) or a portable storage device able to store game files.

7. The portable storage device for a game machine to mount games according to claim 1, wherein the encoding and decoding unit is either a hardware form of an integrated circuit, a programmed integrated circuit, in the form of a firmware in flash memory or in the form of software installed on a hard disk.

8. The portable storage device for a game machine to mount games according to claim 1, wherein the main game machine executes games mounted from the portable storage device according to the following steps:

storing of game files in the storage unit of the portable storage device;

processing of the game files by the encoding and decoding unit and transmitting them through the connector interface;

transmitting of the game files by the connector interface to the connector interface of the main game machine;

sending of the game files to the execution unit by the connector interface of the main game machine;

executing of the game files by the execution unit and producing the operable user interface.

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