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(54) Gaming system

(57) A gaming system (10) is disclosed which comprises at least one gaming communications module (30), at least one gaming server (16), a communications link (18) between the at least one gaming communications module (30) and the gaming server (16) for facilitating communications between the gaming server (16) and the at least one gaming communications module (30). The communications link (18) includes at least one communication wire (20) and the gaming server (16) is arranged to supply first and second server signals to the communication wire (20) from the gaming server (16). The system (10) also comprises a splitter device (24) in communication with the communication wire (20) and arranged to provide the gaming communications module (30) with two signal sources, one of the signal sources being for reception of the first server signals at the gaming communications module (30) and the other of the signal sources being for reception of the second server signals at the gaming communications module (30) .

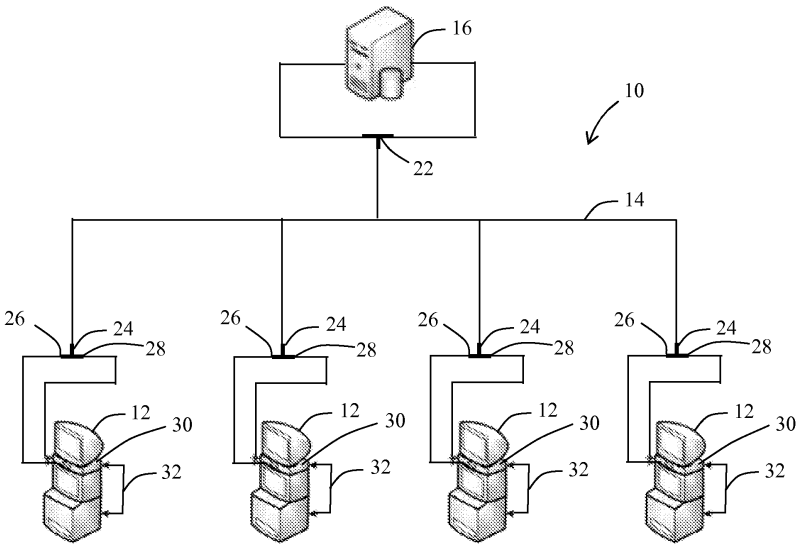

Fig. 1

EP 1 990 783 A2

Description

Field of the Invention

[0001] The present invention relates to a gaming system.

Background of the Invention

[0002] It is known to provide a gaming system which includes at least one gaming machine connected in networked relationship to a gaming server through a communications link. Generally, the communications link comprises several communications wires and is in the form of a Cat 5E or Cat 6 cable.

[0003] In gaming machines provided with a communications module, the communications module connects to the communications link and facilitates communications between the gaming machine and a remote gaming server through the communications link. Such a communications module is sometimes referred to as a Player Marketing Module (PMM). While the interface between the PMM and other operative components of the gaming machine generally uses an industry standard, the PMM typically communicates with the gaming server using a proprietary protocol.

[0004] In existing gaming systems, communications between the PMM and the gaming server typically conform to RS485 or RS422 interface standards. While such interface standards have worked well, speeds of communication possible with RS485 and RS422 are relatively slow to the extent that the bandwidth requirements of recent PMM technology advances often exceed the transmission speed limitations of RS485 and RS422 technology.

[0005] In addition to the constraints imposed by RS485 and RS422 interface standards, existing PMMs also include software and/or hardware based on RS485 and/or RS422 standards and, accordingly, radical changes to operative components of the gaming machine will be required if a higher speed interface standard such as Ethernet is to be used for communications between the gaming server and the PMM.

Summary of the Invention

[0006] In accordance with a first aspect of the present invention, there is provided a gaming system comprising:

a gaming communications module arranged to communicate with at least one gaming server through a communications link having at least one communication wire; and

at least one splitter device in communication with the gaming communications module and arranged during use to provide the gaming communications module with two signal sources from the or each communication wire, one of the signal sources being for reception of first server signals at the gaming communications module from a gaming server, and the other of the signal sources being for reception of second server signals at the gaming communications module from the gaming server.

[0007] In one embodiment, the gaming system comprises at least one gaming server and a communications link between the at least one gaming communications module and the gaming server for facilitating communications between the gaming server and the at least one gaming communications module, the communications link including at least one communication wire and the gaming server being arranged to supply first and second server signals to the communication wire from the gaming server.

[0008] In one arrangement, the gaming system includes at least one joining device arranged to supply first and second server signals to the communication wire.

[0009] The splitter device may be separate from and connectable to the gaming communications module. Alternatively, the splitter device may be incorporated into the gaming communications module.

[0010] In one arrangement, the joiner device is separate from and connectable to the gaming server. Alternatively, the joiner device may be incorporated into the gaming server.

[0011] In one embodiment, the first server signals conform to RS485 or RS422 interface standards.

[0012] In one arrangement, the second signals conform to Ethernet standards.

[0013] The communications link may be a Cat 5E or Cat 6 cable.

[0014] In one embodiment, the communications link includes a plurality of communication wires and the splitter device is arranged to provide the gaming communications module with two signal sources for each of the communication wires.

[0015] In accordance with a third aspect of the present invention, there is provided a gaming server arranged to supply first and second server signals to a gaming communications module through a communications link having at least one communication wire, the gaming server comprising:

at least one joining device arranged to supply first and second server signals to the communication wire.

Brief Description of the Drawings

[0016] The present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a schematic diagram of a gaming system in accordance with an embodiment of the present invention;

Figure 2 is a diagrammatic representation of a communications link of the gaming system shown in Figure 1; and

Figure 3 is a diagrammatic representation of a gaming machine of the gaming system shown in Figure 1.

Description of an Embodiment of the Invention

[0017] Referring to the drawings, there is shown a gaming system 10 comprising a plurality of gaming machines 12 connected through a network 14 to a gaming server 16.

[0018] Typically, the gaming server will be arranged to host a database and software services for use by the gaming machines 12, and to collect data from the gaming machines 12 for storage on the database and subsequent processing.

[0019] The network 14 includes a communications link 18 which in this example is in the form of a Cat 5E or Cat 6 cable having several communication wires 20 arranged in twisted pairs.

[0020] The gaming system 10 also includes a joiner 22 used to supply respective first and second server signals to each required communication wire 20 of the communications link 18 from the gaming server 16. In this example, the first server signals correspond to RS485 or RS422 interface standard signals and the second server signals correspond to Ethernet signals. Accordingly, the joiner 22 in this example comprises an Ethernet connector and a RS232 or RS485 connector and is arranged to join respective connections of the Ethernet connector and the RS232 or RS485 connector together at the communication wires 20.

[0021] Each of the gaming machines 12 also includes a communications module in the form of a Player Marketing Module (PMM) 30 which is arranged to facilitate communications between the gaming machine 12 and the gaming server 16. In the present example, the PMM 30 is in the form of a Sentinel III device available from Aristocrat Technologies Australia Pty Ltd.

[0022] Each of the gaming machines 12 is associated with a splitter 24 which is arranged to split communication signals from each communication wire 20 so as to provide the PMM 30 with first and second signal sources 24 and 26 respectively for each communication wire 20 used, a first signal source 24 being for reception of the first server signals corresponding to RS485 or RS422 standards and the second signal source 26 being for reception of the second server signals corresponding to Ethernet standards. The splitter 24 in this example is arranged to terminate the communication wires 20 with an Ethernet connector and a RS232 or RS485 connector such that each respective communication wire 20 is electrically connected to an electrical contact in the Ethernet connector and the RS232 or RS485 connector.

[0023] It will be understood that by passing both conventional relatively low speed signals and improved relatively high speed signals over the same physical wires a relatively high bandwidth network suitable for future functionality can be produced without sacrificing the existing conventional network. This results in reduced costs because PMM software elements designed for the existing network remain unaltered and will continue to operate until functionality is available for the high speed signals. Such new functionality requiring the benefits of a relatively high bandwidth network can be developed in isolation. In addition, since additional cables are not required, new functionality can be introduced to existing networked gaming systems with minimal interruption to existing infrastructure, in particular without the need to re-cable the gaming floor.

[0024] It will also be understood that although the joiner 22 and the splitters 24 are shown in Figure 1 separate to the respective server 16 and the gaming machines 12, other variations are possible. For example, the joiner 22 may be incorporated into the gaming server 16 and each of the splitters 24 may be incorporated into a PMM 30.

[0025] Furthermore, it will be understood that although the joiner 22 is described above in relation to a device which receives first and second signals from the server 16 and supplies both signals to a communications wire 20 of the communications link 18, the joiner 22 will also perform a splitter function in that communications from one or more of the PMMs 30 to the server 16 are split so as to provide the gaming server 16 with two signal sources, for example for use by separate RS485/RS422 or Ethernet components. Similarly, while the splitters 24 are described in relation to a device which performs a splitting function, it will be understood that the splitters 24 may also perform a joining function in that communications from each of the PMMs 30 to the gaming server 16 are joined and supplied to a respective communications wire 20 of the communications link 18.

[0026] It will also be understood that although the above example is described in relation to a gaming system which comprises one server arranged to provide both conventional RS485/RS422 signals and Ethernet signals, other variations are possible. For example, two gaming servers may be provided, a first gaming server which uses RS485/RS422 type signs and a second gaming server which uses Ethernet signals.

[0027] An example gaming machine 12 is illustrated in Figure 3. The gaming machine 12 includes a console 42 incorporating the Player Marketing Module 30 and has a display 44 on which is displayed representations of a game 46 that can be played by a player. A mid-trim 50 of the gaming machine 12 houses a bank of buttons 52 for enabling a player to interact with the gaming machine, in particular during gameplay. The mid-trim 50 also houses a credit input mechanism 54 which in this example includes a coin input chute 54A and a bill collector 54B. Other credit input mechanisms may also be employed, for example, a card reader for reading a smart card, debit card or credit card. The PMM 30 may include a reading device (not shown) for the purpose of reading a player tracking device, for example as part of a loyalty program.

The player tracking device may be in the form of a card, flash drive or any other portable storage medium capable of being read by the reading device.

[0028] A top box 56 may carry artwork 58, including for example pay tables and details of bonus awards and other information or images relating to the game. Further artwork and/or information may be provided on a front panel 59 of the console 42. A coin tray 60 is mounted beneath the front panel 59 for dispensing cash payouts from the gaming machine 12.

[0029] The display 44 is in the form of a video display unit, particularly a cathode ray tube screen device. Alternatively, the display 44 may be a liquid crystal display, plasma screen, or any other suitable video display unit. The top box 56 may also include a display, for example a video display unit, which may be of the same type as the display 44, or of a different type.

[0030] The display 44 in this example is arranged to display representations of several reels, each reel of which has several associated symbols. Typically 3, 4 or 5 reels are provided. During operation of the game, the reels first appear to rotate then stop with typically three symbols visible on each reel. Game outcomes are determined on the basis of the visible symbols together with any special functions associated with the symbols, and if a function has been allocated to a reel, on the basis of the allocated function.

[0031] Modifications and variations as would be apparent to a skilled addressee are deemed to be within the scope of the present invention.

Claims

1. A gaming system comprising:

a gaming communications module arranged to communicate with at least one gaming server through a communications link having at least one communication wire; and
at least one splitter device in communication with the gaming communications module and arranged during use to provide the gaming communications module with two signal sources from the or each communication wire, one of the signal sources being for reception of first server signals at the gaming communications module from a gaming server, and the other of the signal sources being for reception of second server signals at the gaming communications module from the gaming server.

2. A gaming system as claimed in claim 1, comprising at least one gaming server and a communications link between the at least one gaming communications module and the gaming server for facilitating communications between the gaming server and the at least one gaming communications module, the communications link including at least one communication wire and the gaming server being arranged to supply first and second server signals to the communication wire from the gaming server.

3. A gaming system as claimed in claim 1 or claim 2, wherein the gaming system includes at least one joining device arranged to supply first and second server signals to the communication wire.

4. A gaming system as claimed in any one of claims 1 to 3, wherein the splitter device is either:

- separate from and connectable to the gaming communications module, or;
- incorporated into the gaming communications module.

5. A gaming system as claimed in claim 3, wherein the joiner device is either:

- separate from and connectable to the gaming server, or;
- incorporated into the gaming server.

6. A gaming system as claimed in any one of the preceding claims, wherein the first server signals conform to RS485 or RS422 interface standards.

7. A gaming system as claimed in any one of the preceding claims, wherein the second signals conform to Ethernet standards.

8. A gaming system as claimed in any one of the preceding claims, wherein communications link is a Cat 5E or Cat 6 cable.

9. A gaming system as claimed in any one of the preceding claims, wherein the communications link includes a plurality of communication wires and the splitter device is arranged to provide the gaming communications module with two signal sources for each of the communication wires.

10. A gaming server arranged to supply first and second server signals to a gaming communications module through a communications link having at least one communication wire, the gaming server comprising:

at least one joining device arranged to supply first and second server signals to the communication wire.

11. A method of gaming comprising:

providing a gaming communications module;
communicating with at least one gaming server through a communications link having at least

one communication wire;
splitting communications from the communication link so as to provide the gaming communications module with two signal sources from the or each communication wire, one of the signal sources being for reception of first server signals at the gaming communications module from a gaming server, and the other of the signal sources being for reception of second server signals at the gaming communications module from the gaming server.

12. A method as claimed in claim 11, comprising providing at least one joining device for supplying first and second server signals to the at least one communication wire.

13. A method as claimed in claim 11 or claim 12, comprising providing a splitter device that is either:

- separate from and connectable to the gaming communications module, or
- incorporated into the gaming communications module.

14. A method as claimed in claim 12,wherein said at least one joiner device is either:

- separate from and connectable to the gaming server, or
- incorporated into the gaming server.

15. A method as claimed in any one of claims 11 to 14, wherein the first server signals conform to RS485 or RS422 interface standards.

16. A method as claimed in any one of claims 11 to 15, wherein the second signals conform to Ethernet standards.

17. A method as claimed in any one of claims 11 to 16, wherein communications link is a Cat 5E or Cat 6 cable.

18. A method as claimed in any one of claims 11 to 17, comprising providing the communications link with a plurality of communication wires and arranging the splitter device to provide the gaming communications module with two signal sources for each of the communication wires.

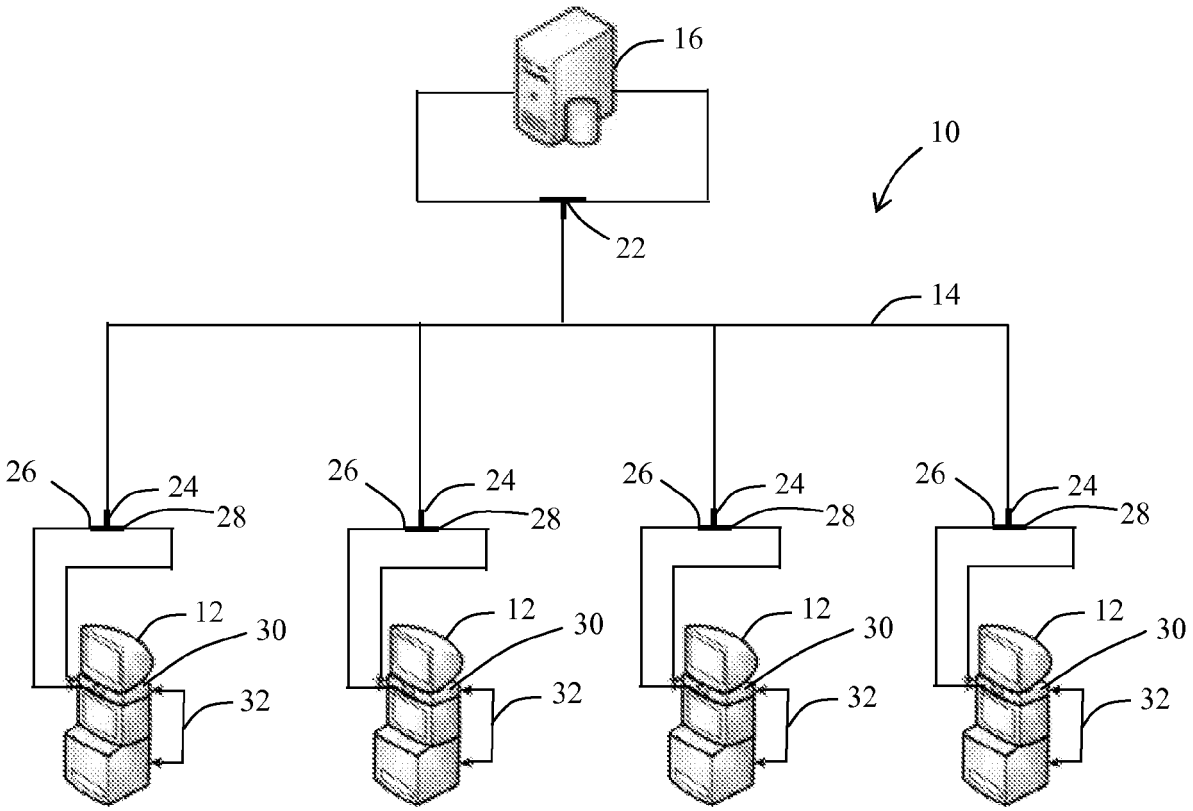

Fig. 1

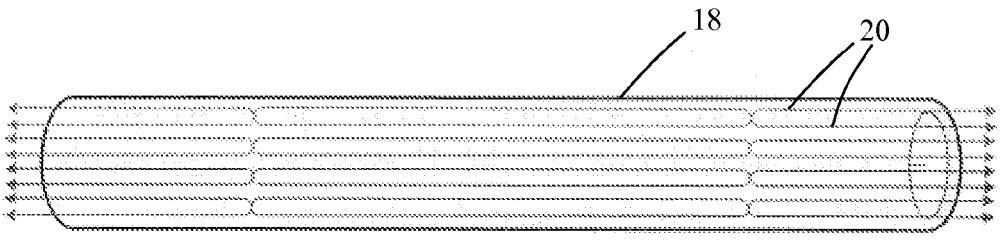

Fig. 2

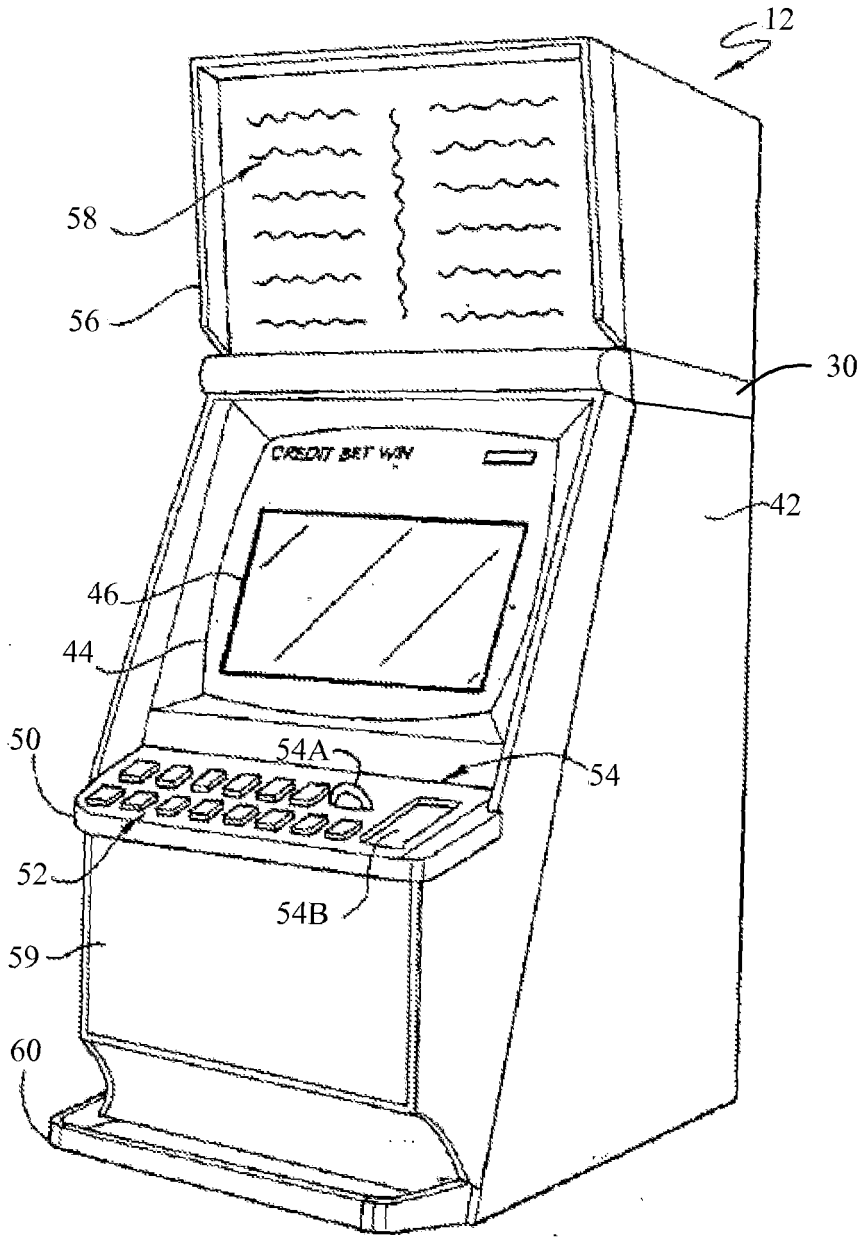

Fig. 3