APPARATUS AND SYSTEMS FOR ADDING EFFECTS TO VIDEO GAME PLAY

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ABSTRACT

Apparatus and systems for adding effects to video game play where players swing or move a controller as part of the video game to simulate a bat, racquet, club or an implement striking an object displayed as part of the video game. The sound effect produced comes from a sliding member contacting a strike surface as part of the physical surroundings of the bat, racquet, club or implement attached to the apparatus or system to enhance the gaming experience.
APPROACH AND SYSTEMS FOR ADDING EFFECTS TO VIDEO GAME PLAY

BACKGROUND OF THE INVENTION

[0001] Field of the Invention

[0002] The invention relates to apparatus and systems for adding realistic effects to playing video games, and more particularly, apparatus and systems for adding realistic sound to video games where players swing a controller to simulate striking an object displayed as part of the game.

[0003] Description of the Related Art

[0004] Video games have become increasingly realistic in order to attract new players and keep the games interesting for veteran game players. Some interactive video games allow the player to swing a controller held in the player's hand to simulate movement of a club or racquet and to simulate striking an object as part of the gaming experience.

[0005] The conventional video games do not duplicate realistic sound effects as part of the game playing experience. For example, the crack of a baseball bat or the hitting of a tennis ball cannot be prerecorded for later playback without losing some element of realism.

[0006] A need exists for apparatus and systems that produce realistic sound effects for video game players that are properly synchronized. A need exists for apparatus and systems that produce realistic effects and the effect is spatially correct such that the sound emanates from the club, racquet or other device being swung by the player. A need also exists wherein the sound effect substantially coincides with the presumed point of contact between the club, racquet or other device and the object displayed in the video game. Further, a need exists for apparatus and systems where the sound is repeatedly and dependably reproduced during play.

SUMMARY OF THE INVENTION

[0007] Apparatus and systems for producing realistic effects for video games where players swing a controller as part of the video game to simulate swinging a bat, racquet, club or any implement to simulate a strike of an object displayed as part of the video game. The embodiments of the invention include sound that comes from the participant’s physical surroundings from a ball or sliding member contacting a surface as part of the game playing experience to enhance the gaming experience and making the video game more realistic.

[0008] Embodiments of the invention are for use with video games that include use of a replica club or implement by the video game player. The term replica club or implement includes objects formed to visually appear the same as a real club or implement that would be used for the actual activity. The replica sports club includes, but is not limited to, a replica tennis racquet, racquetball racquet, baseball bat, gold club, ping pong paddle and a squash racquet, all of which are within the scope of the present invention.

[0009] Embodiments of the invention include implements used with playing video games of all types and themes, and are not limited to replica clubs and the like commonly used for sports activities. In embodiments of the invention, the inventive apparatus and system can be constructed so that the sound effect occurs at substantially the position where the implement is to strike the object displayed as part of the video game.

[0010] Further advantages and embodiments of the invention will be apparent to persons skilled in the art from the drawings and description set forth herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a perspective view of one embodiment of the inventive apparatus and system with a replica tennis racquet.

[0012] FIG. 2 is a perspective view of one embodiment of the inventive apparatus and system with a replica golf club.

[0013] FIG. 3 is a perspective view of one embodiment of the inventive apparatus and system with a replica baseball bat.

[0014] FIG. 4 is an exploded view of one embodiment of the inventive apparatus and system.

[0015] FIG. 5 illustrates a cross section view taken along line 5-5 of FIG. 1 showing an embodiment of the invention and positions during use of the invention.

[0016] FIG. 6 is a perspective view of an embodiment of the invention used with an adapter for a video game controller.

[0017] FIG. 7 is a perspective view of an embodiment of the invention connected to an adapter for a video game controller.

[0018] FIG. 8 is a cross section view taken along line 8-8 of FIG. 7 showing an embodiment of the invention with an adapter for a video game controller.

[0019] FIG. 9 is a cross section view taken along line 8-8 of FIG. 7 showing one step in a release of the adapter from the apparatus by movement of a latch in the direction of the arrow shown in FIG. 8.

[0020] FIG. 10 illustrates a cross section view of an embodiment of the invention taken along line 10-10 of FIG. 2.

[0021] FIG. 11 illustrates a cross section view of an embodiment of the invention taken along line 11-11 of FIG. 3.

DETAILED DESCRIPTION OF EMBODIMENTS OF THE INVENTION

[0022] Reference is made to the figures in which elements of the illustrated embodiments of the invention are given numerical designations so as to enable one skilled in the art to make and use the invention. It is understood that the following description is exemplary of embodiments of the invention and it is apparent to skilled persons that modifications are possible without departing from the inventive concepts herein described.

[0023] One embodiment of the inventive apparatus 10 is shown in FIG. 1 with a replica sports racquet 12 commonly used for the game of tennis. The racquet 12 is attached to the connector assemblage 14 that is configured to connect to the adapter 16 as shown in FIG. 1. In this embodiment, the racquet 12 is smaller than an actual tennis racquet and is made from a lightweight plastic material but the racquet 12 is visually recognizable as a replica of a tennis racquet. The adapter 16 is constructed to engage the controller 18 as shown in FIG. 1. The controller 18 includes the hand-held video game controllers known to persons skilled in the art for use in playing video games and the present invention includes the use of all such controllers in connection with the present invention.

[0024] FIG. 2 illustrates an embodiment of the apparatus 10 with a replica golf club 20. The club 20 is attached to the connector assemblage 14 which is configured to connect to the adapter 16 as shown in FIG. 2 with the adapter 16 constructed to engage the controller 18. The controller 18 includes the hand-held video game controllers known to per-
sons skilled in the art and the present invention includes the use of all controllers that can be gripped by an individual in connection with the present invention.

[0025] FIG. 3 illustrates an embodiment of the apparatus 10 with a replica baseball bat 22. The bat 22 is attached to the connector assemblage 14. The connector assemblage 14 is configured to connect to the adapter 16 and the adapter 16 constructed to engage the controller 18 as shown in FIG. 3. In the embodiments shown in FIGS. 1-3, the adapter 16 includes a grip surface 24 thereon.

[0026] FIG. 4 shows an embodiment of the connector assemblage 14 configured with the first plate 30 and the second plate 32 held together by a series of threaded fasteners 34. The first plate 20 includes the spring-biased latch 36 and the spring 38 placed between the first plate 30 and the second plate 32 as shown in FIG. 4. The sliding member 40 is placed within the housing 42. In the embodiment shown in the Figures, the sliding member 40 is a spherical object such as a ball. The invention is not limited to the use of balls or spheres and includes members having other shapes. The sliding member 40 is magnetically attracted to a magnet and is inside a well known magnetically attracted material, including iron and ferromagnetic materials, all of which are within the scope of the present invention.

[0027] As shown in FIG. 4, the housing 42 includes a strike surface 48 at one end of the housing 42 and a magnet 50 that is separated from the strike surface by a pathway or channel 52 for the sliding member 40. The housing 42 is placed within an opening 44 of the implement 46 as illustrated in FIG. 4. The housing 42 with the sliding member 40 contained therein is secured to the implement 46 by the connector assemblage 14 by connecting the first plate 30 to the second plate 32 by the threaded fasteners 34 in a conventional manner. In alternative embodiments, the housing 42 includes enclosures having different shapes and sizes than the housing 42 shown in the Figures. The enclosures in alternative embodiments are adapted to hold the sliding member 40 and allow the sliding member 40 to move between a magnetic material and a strike surface and also fit onto an implement 46.

[0028] The adapter 16 is attached to the connector assemblage 14 and the controller 18 is secured to the adapter 16 as shown in FIG. 4. An individual playing a video game grips the controller 18, with the adapter 16, in his or her hand and thereby also holds the implement 46 as one would normally hold a racquet, bat or club.

[0029] FIG. 5 illustrates an embodiment of the invention. The individual playing a video game holds the controller 18 with the adapter 16 in his or her hand so that the sliding member 40 is proximate to the magnet 50. The magnet 50 magnetically holds the sliding member 40 in that position by magnetic attraction. In this embodiment, the post 60 from the connector assemblage 14 supports the sliding member 40 in this position. The video game player swings the apparatus 10 as indicated by the arrow 62 in FIG. 5 to a second position, shown in phantom in FIG. 5, in response to stimuli displayed on a screen or other display mechanism as part of a video game. The swing is like a normal swinging motion that most players would recognize as a true motion as if the individual is playing the sport or engaging in the activity for real.

[0030] The swing of the apparatus 10 from the initial position shown in FIG. 5 to the second position shown in FIG. 5 causes the sliding member 40 to move from proximate the magnet 50 to the strike surface 48 by centrifugal force. The contact between the sliding member 40 and the strike surface 48 produces a sound of the sliding member 40 contacting the strike surface 48 at the second position. The second position shown in phantom in FIG. 5 substantially coincides with the simulated striking of an object displayed as part of a video game being played by the individual player holding the apparatus 10.

[0031] In embodiments of the invention, the implement 46 is a replica tennis racquet 12 and the object is an image of a tennis ball. In other embodiments, the implement is a replica baseball bat 22 and the object is an image of a baseball. In further embodiments, the implement 46 is a replica golf club 20 and the object is an image of a golf ball. The invention includes all other implements and objects that can be used in video games produced where the player grips a hand held controller as part of the video game experience.

[0032] FIG. 6 and FIG. 7 illustrate a method of removably attaching the connector assemblage 14 to the adapter 16 in one or more embodiments. The adapter 14 is pushed onto the assemblage 14 and secured to the assemblage 14 by the spring biased latch 36. As shown in section view in FIG. 8, the adapter 16 is removed from the assemblage 14 by sliding the latch 36 in the direction of the arrow 70. The adapter 16 is pulled away from the assemblage 14 when the latch 26 is in the position shown in FIG. 9.

[0033] FIG. 10 illustrates an embodiment of the invention with a replica golf club 20. The video game player swings the apparatus 10 in response to stimuli displayed on a screen or other display mechanism as part of a video game such as an image of a golf ball. The sliding member 40 moves from proximate the magnet 50 toward the strike surface 48 as indicated by arrow 80 and the sliding member 40. The contact between the sliding member 40 and the strike surface 48 produces a sound of the sliding member 40 contacting the strike surface 48.

[0034] FIG. 11 illustrates an embodiment of the invention with a replica baseball bat 22. The video game player swings the apparatus 10 in response to stimuli displayed on a screen or other display mechanism as part of a video game such as an image of a ball. The sliding member 40 moves from proximate the magnet 50 toward the strike surface 48 as indicated by arrow 90 and the sliding member 40. The contact between the sliding member 40 and the strike surface 48 produces a sound of the sliding member 40 contacting the strike surface 48. FIG. 11 illustrates that the distance between the magnet 50 and the strike surface 48 can be longer in embodiments of the invention to accommodate activities where the presumed point of contact with the object displayed by the video game requires a longer swing time.

[0035] While the invention has been described with regards to particular embodiments, it is recognized that additional variations of the invention may be devised and utilized without departing from the inventive concepts described herein.

What is claimed is:

1. An apparatus for video gaming comprising:
   a housing having a strike surface and a magnet, the strike surface and the magnet separated by a channel;
   a sliding member located within the channel, the sliding member being moveable within the channel between the magnet and the strike surface, the sliding member comprised of a material magnetically attracted to the magnet;
the housing adapted to be secured to an implement adjacent
the strike surface, the implement being adapted to be
swung by an individual when secured to the housing;
and
the housing adapted to be secured to a controller such that
when the housing is secured to the controller and the
controller is swung from a first position to a second
position, the sliding member moves in the channel from
the magnet to contact the strike surface to produce sound
of the sliding member contacting the strike surface at
substantially the second position.
2. The apparatus of claim 1 where the sliding member is
substantially spherical.
3. The apparatus of claim 1 where the sliding member is of
a ferromagnetic material.
4. The apparatus of claim 1 where the sliding member
moves between the magnet and the strike surface by centri-
fugal force.
5. The apparatus of claim 1 where the second position
substantially coincides with the simulated striking of an
object displayed on a screen as part of a video game.
6. The apparatus of claim 1 where the implement is a
replica tennis racquet.
7. The apparatus of claim 1 where the implement is a
replica baseball bat.
8. The apparatus of claim 1 where the implement is a
replica golf club.
9. The apparatus of claim 5 where the object displayed on
the screen is an image of a tennis ball.
10. The apparatus of claim 5 where the object displayed on
the screen is an image of a baseball.
11. The apparatus of claim 5 where a golf ball is the object
displayed on the screen represents a golf ball.
12. A system for sound effects for video game play, com-
prising:
an enclosure having a strike surface and a magnet;
a sliding member being moveable between the magnet and
the strike surface within the enclosure, the sliding mem-
ber comprised of a material magnetically attracted to the
magnet;
the enclosure adapted to be secured to an implement adja-
cent the striking surface; and
the enclosure adapted to be secured to a hand held video
game controller such that the enclosure and controller
combination can be moved in a swinging motion from a
first position to a second position such that the sliding
member moves from the magnet to contact the strike
surface to produce sound of the sliding member contact-
ing the strike surface at approximately the second posi-
tion.
13. The system of claim 12 where the sliding member is
substantially spherical.
14. The system of claim 12 where the sliding member
includes ferromagnetic material.
15. The system of claim 12 where the sliding member
moves between the magnet and the strike surface by centri-
fugal force.
16. The system of claim 12 where the second position
approximately coincides with the simulated striking of an
object as part of a video game.
17. The system of claim 16 where the implement is a
replica sports racquet.
18. The system of claim 17 where the object is an image of
a ball.

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