Abstract

The embodiments of the mechanism in the present invention aim to produce a force that acts as feedback to the user who is using an accessory such as racquet or a bat or a similar device and is connected to Virtual reality or a computer simulation games or sports. The mechanism is housed inside the accessory such as racquet or a bat or a similar device.

When the user, who is playing a sport or a game in Virtual reality or in a computer simulation environment, tries to hit a virtual object such as a ball by swinging the accessory such as a bat or a similar device, the said mechanism housed inside the accessory gets the inputs of the virtual impact at the point of contact from the simulated environment and produces a counter force that acts as a feedback.

This force that is produced by the said mechanism is

a. in the direction relative to virtual impact
b. in proportion to the intensity of the virtual impact
c. produced at the contact point of virtual impact
d. produced for a time period till the virtual impact lasts.

This force produced by the mechanism inside the accessory causes it to move in a relative direction of the virtual impact there by simulating the feeling of hitting a real object in the user who is holding or using the accessory.

The mechanism uses a pressurized stream of air jet emitted through a nozzles that are connected to valves which in turn are connected to a pressure chamber to produce an outward force. The mechanism is placed inside the accessory such as a bat or similar device and the force produced at the tip of nozzles act as a feedback to the user using the accessory. The mechanism is also capable of drawing in the air produce an inward force emitted at the tip of the nozzles that are connected to valves which in turn are connected to a pressure chamber.

A combination of valves and nozzles are arranged in the form of a matrix in an enclosure. This enclosure is connected to the Pressure chamber. This enclosure and the pressure chamber form the integral components of the mechanism. This mechanism can be housed inside the accessory such as a racquet or a bat or a similar device. This mechanism gets the inputs such as the intensity of the impact, co-ordinates of the contact point of the impact, time period the impact lasts and the direction of the impact from the simulated computer environment.

Figure 1