

SPECIFICATION OF PATENT
APPLICATION

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PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED :
ADVANCED TEACHING AID

This invention is described in the following statement :-

THIS INVENTION relates to an advanced teaching aid which has particular but not exclusive applicability to the game of golf.

Golf is becoming an increasingly popular pastime. To improve their golf many persons are now using professional coaching, to change for example their golf swing. Often, however, players wish to emulate the swing of well known successful golf professionals due to their exposure in the mass media and success in playing the game of golf. At present this can only be achieved if a particular swing of a golf professional is studied closely and although coaches of golf can assist persons who wish to emulate a particular golf swing often with the aid of video cameras it is generally a difficult if not impossible task.

The present invention aims to provide a method and means for teaching movement or techniques and in particular golf swings which enables a person to more closely emulate the swing of another person or say of a swing machine. Whilst the present invention is particularly suited to the game of golf it may also be applied to other situations where emulation of a particular movement is required, such as in dance steps. Other objects and advantages of the invention will become apparent from the following description.

With the above and other objects in view the present invention provides in a preferred aspect a method for emulating a preferred movement comprising the steps of visually recording a person's movement, analyzing said person's movement and comparing said movement with said preferred movement, editing said visual recording or regenerating a visual recording in accordance with said analysis and which approximates or simulates said preferred movement, said edited or regenerated visual recording providing a visual record of said persons movement adjusted to said preferred movement.

Preferably a plurality of said preferred movements are stored in suitable storage means, for example a computer whereby a person may have a range of preferred movements to choose from and to attempt to emulate. Preferably also means are provided whereby dialogue may be associated with said regenerated visual

record to provide instructions to the person which assists the person to emulate said preferred swing. Suitably said dialogue is associated with said preferred movements stored in said storage means, said dialogue being matched to said preferred movements.

The present invention also provides apparatus for performing the above method, said apparatus including means for recording a visual representation of said person's movement and creating a signal representative thereof, computer storage means for storing said predetermined preferred movements or signals representative thereof, means for analyzing and comparing the said created signal and a selected said predetermined signal and means for regenerating a further said signal or editing said created signal dependent upon said analysis and comparison, said further or edited said signal being representative of said persons movement adjusted in accordance with said selected preferred movement.

The video signal of the persons technique is preferably recorded using a video camera and a video cassette. The video signal is then transmitted by any suitable means to said computer storage means which stores the predetermined preferred signal and analyses the respective signals.

The computer storage means is preprogrammed in various languages and movements of selected players each of which may be selected as desired for comparison with the video signal of the players movement. The comparison can be carried out using either software techniques or hardware techniques and various sampling procedures. The computer storage means is also preferably software or hardware programmed to take into account the size of the player and other physical characteristics such as length of arm so that a compensation factor may be included whereby the movements such as swings of the player and the preprogrammed stored movements or swing in the computer storage means can be correctly compared. This comparison can take place at different times or positions in say a swing to produce a signal representative of the difference between the swing. This comparison signal may comprise a measurement of distance, angle or speed of swing.

Once this signal is generated it is used to create a new visual record or edit or superimpose on the visual record of the person's movement or swing, a signal which will provide an emulation in visual form of the type of swing which the person will be required to have to emulate the preferred swing. This signal is preferably represented in video form so that person can see clearly the techniques which are required. Where the comparison and analyzing is carried out by computer storage means at a remote location the created video signal is transmitted back to the player by conventional transmission means as above. This signal can then be converted into a form which may be stored on a video cassette and which thus may be viewed as desired and used to assist in the desired corrections to the swing or movement.

Whilst the invention described above is particularly application to the game of golf to assist in a person emulating a particular golf swing, it may also be applied to other situations where emulation of a movement is required. For example the invention may be applied to many sports such as the game of tennis where for example emulation of a particular service stroke is required. Alternatively the invention may be applied to visual arts fields where particular movements are required to be emulated.

Whilst the above has been given by way of illustrative embodiment of the invention, all such modifications and variations thereto as would be apparent to persons skilled in the art are deemed to fall within the broad scope and ambit of the invention as herein set forth.

DATED this thirtieth day of May 1991

RICHARD JOHN BAKER
By My Patent Attorney

JOHN R. G. GARDNER