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(54) **INDIVIDUAL NYSTAGMUS SIMULATED TRAINING EXPERIENCE**

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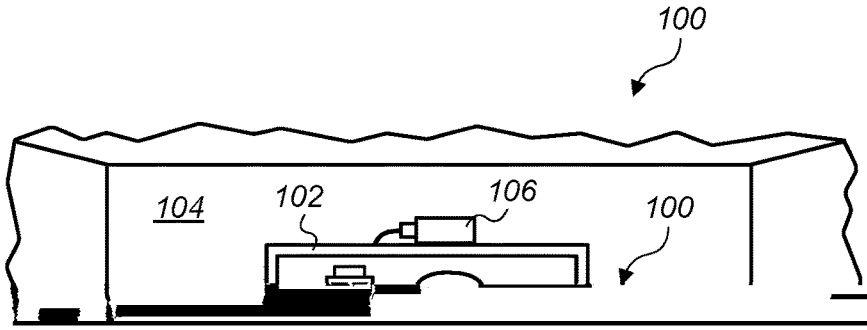
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INDIVIDUAL NYSTAGMUS SIMULATED TRAINING EXPERIENCE

PRIORITY CLAIM

using a computer system, of a virtual subject capable of exhibiting nystagmus to a trainee; capturing the movements

of the trainee using the computer system during the administration of a HGN test to the virtual subject; and simulating

BRIEF DESCRIPTION OF THE DRAWINGS

Advantages of the present invention will become apparent

detailed description of embodiments and upon reference to

the accompanying drawings in which:

FIG. 1 depicts a wall mounted computer screen for

in before the eyes reach a 45 degree angle. Another test is that at maximum deviation (as far as the subject eyes can go and still see the object) the eyes begin jerking within four

In order to better accommodate varying training require-

ments, the training system was designed and developed to allow experts in this field, such as Drug Recognition Experts

phones, digital media players, game consoles, digital wrist-

watches, head-mounted display systems, digital televisions,

operable to execute the computer programs to implement

computer-implemented systems and methods.

computer readable signals. The motion capture device may

capture the relative distance from the motion capture device

capture the speed of the object and the angle of the object

with respect to a central axis of the motion capture device.

based on the angle, or BAC level, set by the user. This accurately simulates what occurs in real-life when an

receiving, via a motion capture device, input indicative of movement of an object by the trainee;

motion of an HGN test. Eye animations have been developed to present the lifelike jerking motion that occurs with

modifying a depiction of the virtual subject on the

based on the movement of the object by the trainee,

modifying a depiction of the virtual subject on the display device; and

simulating nystagmus in the virtual subject based on at least one of the one or more parameters.

15. The system of claim **14**, wherein the display device is mounted such that the middle of the display device is at a height of between about 4 feet to about 6 feet from the ground.

16. A non-transitory computer-readable storage medium comprising program instructions stored thereon, wherein the program instructions are configured to implement a method of simulating a horizontal gaze nystagmus (HGN) test comprising:

receiving, by a computer system, a selection of one or more parameters for the HGN test;

providing, by the computer system, a computer simulation of the HGN test to a trainee, including by:

presenting, via a display device, a virtual subject that is capable of exhibiting simulated nystagmus;

receiving, via a motion capture device, input indicative of movement of an object by the trainee;

based on the movement of the object by the trainee, modifying a depiction of the virtual subject on the display device; and

simulating nystagmus in the virtual subject based on at least one of the one or more parameters.

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