Patent claims:

1. A method for operating a wheel of fortune by a user, wherein a camera is used to establish the position of the center of mass of the body and of a hand of the user,

setting an upper height threshold to a predetermined value in relation to the center of mass of the body, wherein, when the position of the hand exceeds the upper height threshold, a turning phase is started, during which turning phase the position of the wheel of fortune is coupled to the position of the hand and the position of the hand is established continuously,

continuously determining the movement performed by the movement of the hand of the user and establishing a turning angle (α),

continuously determining an angular velocity (ω), which is the rate of change of the established angle (α) over time,

completing the turning phase depending on a threshold value and determining the angular velocity (ω) as an initial turning velocity (ω_e) preferably directly before the end of the turning phase,

starting a free rotational phase after the end of the turning phase, wherein the further turning of the wheel of fortune is performed with the initial turning velocity (ω_e) as initial velocity and the wheel of fortune is continuously decelerated and comes to rest at a certain end position and this end position is kept available,

setting a further height threshold to a predetermined value below the center of mass of the body, and

when the turning phase is completed, starting the free rotational phase when the position of the hand drops below the further height threshold.

2. The method as claimed in claim 1, wherein the turning phase is completed and the free rotational phase is started when the angle covered by the wheel of fortune with respect to the initial position during the turning phase exceeds a predetermined threshold value and/or when the angular velocity (ω) exceeds a predetermined threshold value.

3. The method as claimed in claim 1, wherein the turning angle (α) is established periodically in time as an angle between a straight line, extending through the center of mass of the body and the position of the hand, and a predetermined, in particular perpendicular, reference straight line.

4. The method as claimed in claim 1, wherein, at the start of the turning phase, the turning angle (α) is set to a start angle αstart=α_0 and, during the turning phase, the position (hp_n) of the hand of the user is established continuously at predetermined times tn

$$hp_n=[hp_n_X, hp_n_Y, hp_n_Z],$$

and in that the following calculations are performed at each time (tn) during the turning phase:

$$\beta n=\operatorname{atan2}(hp_n_Y-hp_n+1_Y, hp_n+1_X-hp_n_X)$$

$$dn=\sqrt{((hp_n+1_X-hp_n_X)^2+(hp_n+1_Y-hp_n_Y)^2)}$$

$$\Delta\beta n=\beta n-\alpha_n$$

$$fexp_n=f(\Delta\beta n)$$

$$\Delta\alpha n=d0*fexp_n*fsensitivity$$

$$\alpha n=\alpha n-1+\Delta\alpha n$$

where αn is the turning angle of the wheel of fortune at the time tn and where, preferably, f is the sine function and where fsensitivity has a value between 0 and 1, in particular between 0.1 and 0.4.

5. The method as claimed in claim 1, wherein the position of the hand at the time of exceeding the height threshold are compared to the position of the center of mass of the user in relation to a coordinate direction extending horizontally and normally to the plane of the wheel of fortune and a rotation of the wheel of fortune in the clockwise direction or in the counterclockwise direction is assumed depending on this comparison.

6. The method as claimed in claim 1, wherein the wheel of fortune is depicted at its respective turning angle (α) on a monitor during the turning phase and/or during the free rotational phase and this representation is updated at predetermined intervals such that a turning movement of the wheel of fortune is perceived on the monitor.

7. The method as claimed in claim 1, wherein the position of the center of mass of the body and of the hand of the user is established by means of a 3D camera or an infrared-based depth-

sensor camera, wherein distance information to the camera is respectively established for a number of pixels of the respective camera.

8. The method as claimed in claim 1, wherein, of those users situated in the recording region of the camera, it is only the user closest to the camera who is used for establishing the turning movement of the wheel of fortune.

9. A wheel of fortune apparatus comprising:

a display unit with a monitor for depicting a wheel of fortune,

an acquisition unit with a camera for detecting and recording a user turning the wheel of fortune, and

a control unit connected to the acquisition unit and to the display unit,

wherein the control unit is configured to establish the position of the hand and of the center of mass of the body of a user situated in the recording region of the camera,

wherein the control unit is programed to depict the wheel of fortune on the display unit at predetermined times with a predetermined turn angle (α),

wherein the control unit is programed to be put into an initial state upon activation, in which the control unit actuates the acquisition unit for establishing the positions of the center of mass of the body and for continuously establishing the position of the hand of the user,

wherein, the control unit is programed so that, an upper height threshold can be set to a predetermined value in relation to the center of mass of the body and a comparison of the established position of the hand with the upper height threshold can be undertaken and, when the position of the hand exceeds the upper height threshold, the initial state is completed and a turning phase starts,

wherein the control unit is programed to continuously establish the position of the hand during the turning phase and continuously establishes the turning angle (α) performed by the movement of the hand of the user and couples the turning of the wheel of fortune to the movement of the hand, wherein it furthermore continuously determines the angular velocity (ω), which is the rate of change of the established angle (α) over time,

wherein the control unit is programed to end the turning phase depending on a threshold value and establishes the angular velocity (ω) established directly before the end of the turning phase as initial turning velocity (ω_e),

wherein the control unit is programed to, after the end of the turning phase, starts a free rotational phase, during which the further turning of the wheel of fortune can be undertaken with

the initial turning velocity (ω_e) established thus and the wheel of fortune is continuously decelerated and comes to rest at a certain end position and this end position can be kept available by the control unit, and

wherein the control unit is programed to establish further height threshold set to a predetermined value below the center of mass of the body, and the control unit ends the turning phase and starts the free rotational phase when the hand drops below the further height threshold.

10. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit is programed to end the turning phase and start the free rotational phase when the turning angle (α) covered by the wheel of fortune with respect to the initial position during the turning phase exceeds a predetermined threshold value and/or when the angular velocity (ω) exceeds a predetermined threshold value.

11. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit comprises a turning angle determination unit, which is programed to establish the turning angle (α) periodically in time as an angle between a straight line, extending through the center of mass of the body and the position of the hand, and a predetermined, in particular perpendicular, reference straight line.

12. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit comprises a turning angle determination unit, which is programed to:

set the turning angle (α) to a predetermined start angle $\alpha start=\alpha_0$ at the start of the turning phase,

establish, during the turning phase, the position (hp_n) of the hand of the user continuously at predetermined times tn

$$hp_n=[hp_n_X, hp_n_Y, hp_n_Z], \text{ and}$$

perform the following calculations at each time tn during the turning phase:

$$\beta n=\operatorname{atan2}(hp_n_Y-hp_n+1_Y, hp_n+1_X-hp_n_X)$$

$$dn=\sqrt{((hp_n+1_X-hp_n_X)^2+(hp_n+1_Y-hp_n_Y)^2)}$$

$$\Delta\beta n=\beta n-\alpha_n$$

$$fexp_n=f(\Delta\beta n)$$

$$\Delta\alpha n=d0*fexp_n*fsensitivity$$

$$\alpha n=\alpha n-1+\Delta\alpha n$$

where αn is the turning angle (α) of the wheel of fortune at the time (tn) and where, preferably, f is the sine function and where fsensitivity has a value between 0 and 1, in particular between 0.1 and 0.4.

13. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit further comprises a comparison unit, which is programed to compare the position of the hand at the time of exceeding the height threshold to the position of the center of mass of the user in relation to a coordinate direction extending normally to the plane of the wheel of fortune and horizontally, and establish whether a rotation of the wheel of fortune in the clockwise direction or in the counterclockwise direction takes place depending on this comparison.

14. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit is programed to cause the display unit to depict the wheel of fortune at its respective turning angle (α) on the monitor during the turning phase and/or during the free rotational phase and update this representation at predetermined intervals such that a turning movement of the wheel of fortune can be perceived on the monitor.

15. The wheel of fortune apparatus as claimed in claim 9, wherein the camera is a 3D camera or an infrared-based depth-sensor camera, and the control unit is programed to establish distance information to the camera based on a number of pixels.

16. The wheel of fortune apparatus as claimed in claim 9, wherein the control unit further comprises a selection unit, which, of those users situated in the recording region of the camera, selects only the user closest to the camera for establishing the turning movement of the wheel of fortune.