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(54) Title: SYSTEMS AND METHODS FOR A MULTI-DEGREE OF FREEDOM RIDE VEHICLE

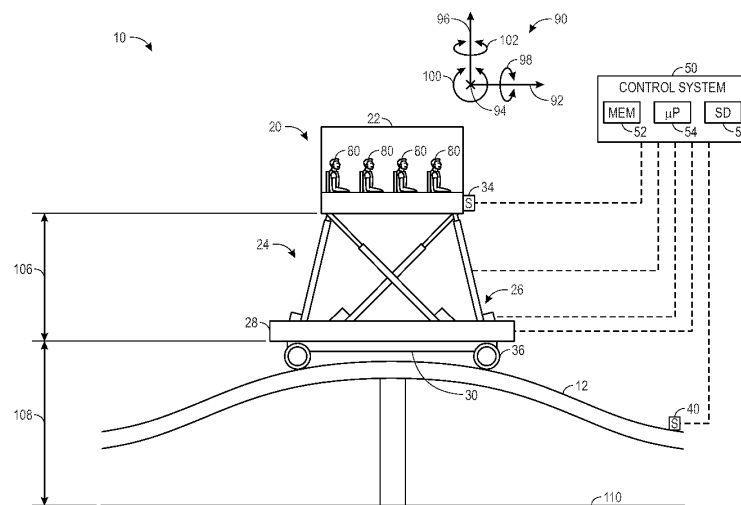


FIG. 3

(57) Abstract: A ride system 10 includes a ride vehicle 20 and an external sensor assembly 40 disposed along a ride path 12 and configured to measure external parameters. The ride vehicle 20 includes an internal sensor assembly 34 configured to measure internal parameters, a chassis 30, a cabin 22, and a motion base 24 disposed between the chassis 30 and the cabin 22, such that the motion base 24 includes a turntable 28 and a plurality of actuators 26. The ride vehicle 20 also includes a controller that instructs (i) the turntable 28 to rotate and (ii) the plurality of actuators 26 to rotate, extend, or retract, to control six or more degree-of-freedom (DOF) motion of the cabin 22 relative to the chassis 30, such that the controller is configured to instruct the turntable 28 and the plurality of actuators 26 based on the external parameters, the internal parameters, or both.

[Continued on next page]

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