

Title of invention: Tracking system for simulating body motion

ABSTRACT

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According to a first aspect of the present invention, there is provided a tracking system for simulating body motion into a computing environment, the system comprising one or more processors; an optical sensor configured to signal that movement of the optical sensor has occurred through the one or more
10 processors detecting that captured successive frames are different, the one or more processors measuring the movement by referencing set points across the successive frames; a plurality of inertial measurement units, each controlled by the one or more processors to measure rotational data; and a hub in communication with the inertial measurement units and the optical sensor, wherein the hub receives the rotational data from the plurality of inertial measurement units over one or more wireless
15 communication channels, the hub controlled by the one or more processors to combine the rotational data obtained while tracking the body motion with data of the measured movement obtained while tracking the body motion, to output a data stream that enables simulation of the body motion in the computing environment, wherein a body part movement in the computing environment is deduced from its measured rotational data and the measured rotational data of other connected body parts and the
20 position of the body in the computing environment is deduced from the data of the measured movement.

Figure 4