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Interface of virtual reality equipment-Positioning equipment

虚拟现实设备接口 定位设备

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1 Scope

This document specifies the virtual reality device to obtain parameters, query parameters, configure parameters, control working status and position the positioning device.

Interface requirements for transmission of device status information.

This document is applicable to the design and production of virtual reality devices, as well as the design of positioning service interfaces. It is also used as a reference for augmented reality devices.

2 Normative references

This document has no normative references.

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1 virtual reality

The computer-based modern high-tech means are used to generate realistic vision, hearing, touch, smell, taste and other multi-sensory integration The digital artificial environment is a kind of artificial environment. Users use some input and output devices to interact with objects in the virtual world in a natural way.

The interaction creates a feeling and experience of being in a real environment.

[Source. GB/T 38259-2019, 3.1]

3.1.2 Positioning equipment

Track the dynamic position and orientation information of the user of the virtual reality device, and transmit information such as posture, point cloud, plane, time and tactile feedback Sent to the device in the VR control system.

Note 1.Devices include but are not limited to inertial sensors (such as accelerometers, gyroscopes), magnetometers, optical sensors, acoustic sensors, and image acquisition devices.

Note 2.Output information includes pose, point cloud, plane, time, tactile feedback, etc.

Note 3.Virtual reality positioning devices are divided into head positioning, handle positioning, gesture recognition, limb positioning and tracking devices according to their functions.

3.1.3 pose

Determine the posture and spatial position of an object in three degrees of freedom in three-dimensional space.

3.1.4 Quaternion

A method for determining the orientation and posture of an object in three degrees of freedom in three-dimensional space.

Note. This feature can be used to express any three-dimensional rotation. A quaternion has one real part and three imaginary parts.

3.2 Abbreviations

The following abbreviations apply to this document. ACC. Accelerometer