Mobile Robot controlled by hands in Virtual Reality captured by Intel RealSense SR300

[ICN5406] Mobile Robot 2018

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We will create controlling device for mobile robot. The device will be interactable by hands in virtual reality. We want to make it like an entertainment. We will create a virtual panel and using this panel player will be able to control the mobile robot. On the panel, there will be two triggers to control the speed of each wheel.

We will be using Intel RealSense SR300 sensor, to capture motion of hands. Because of RealSense's minimal system requirements, the camera have to be installed on more powerful device than the mobile robot. The problem is caused by the USB connector and the CPU. We decided to install the camera on the notebook of one participant.

To develop controlling software, we will use Unity 2018. This engine will help us to render game environment. To develop a hand control, we will use Legacy Intel RealSense SDK 2016. This SDK can recognize and track a hand in front of RealSense camera, it also contains a kit for Unity which helps to manage the game objects.