Glove for sensing heat and cold in virtual reality apps

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Can you imagine burning your fingertips or feeling that ice freezes your hand as you interact in a virtual reality program? The Mexican company Vivoxie has created Power Claw, a pair of gloves with an interface that

stimulates the skin and allows the sense of touch in cyber worlds.

The device generates sensations of heat, cold, vibration and roughness of objects in a virtual reality simulation. The gloves are complemented with Oculus Rift glasses.

Leap Motion software was also implemented to identify the user's hands in different simulations. The development team at Vivoxie created two demos with the Unity platform, used in the creation of video games for consoles or the web, said Enya Vera, responsible for the area of business intelligence at the company.

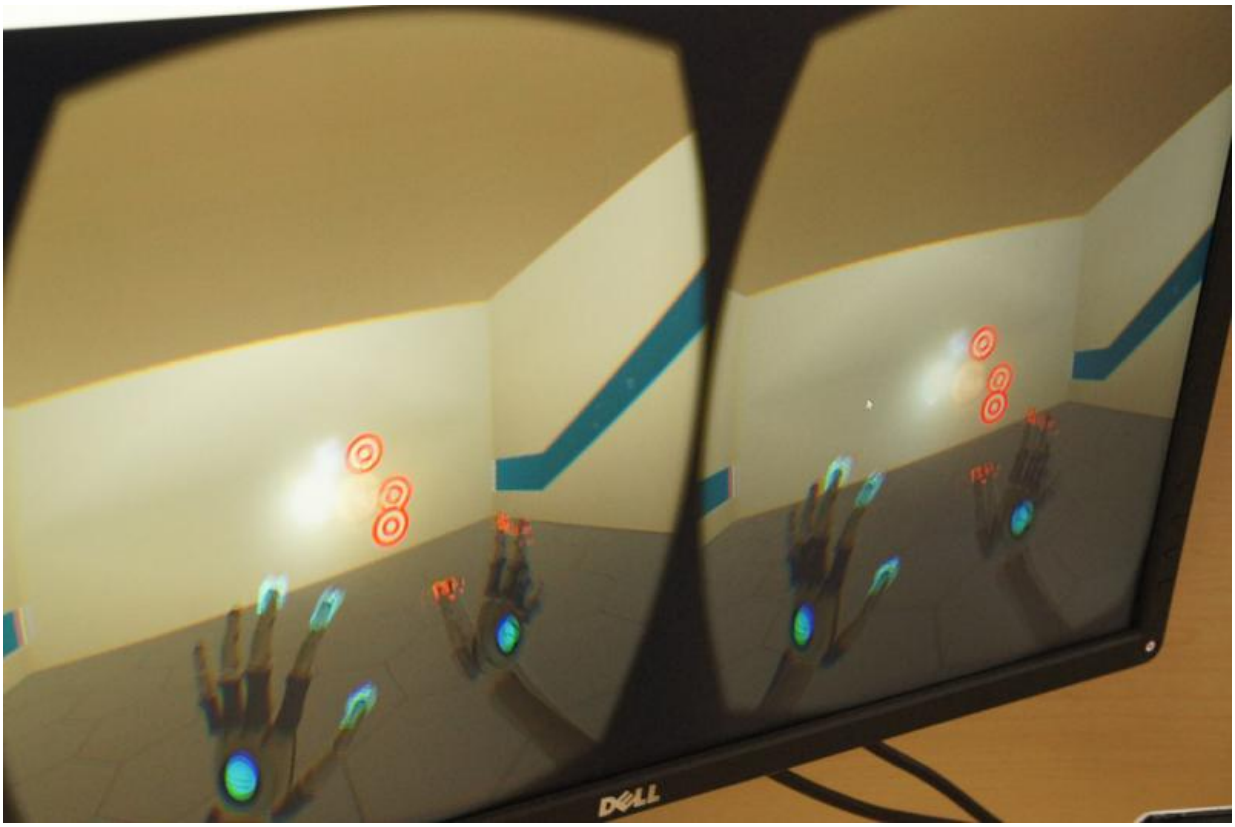
One of the game demos simulates the interior of a building where the user must perform small tasks, for example, hurling thunderbolts with their hands to destroy a number of targets, opening the doors of an elevator, and shooting fireballs. Users feel their fingers burn or freeze when lifting a piece of ice, explained Vera.

With this trial version of the game, the Vivoxie team attended the Gamescom 2015 in Germany, where they presented the first PowerClaw prototype, which has three actuators in the thumb, index and middle fingers that transmit different sensations.

The aim is to offer Power Claw as a peripheral or accessory device to be used in different applications, not limited to video games; for example, education, medicine or engineering apps. First, Vivoxie will make its own apps to work with the gloves.

Then the team will seek partnerships with other companies. However, it is necessary to develop an API and developer kit before discussing a possible alliance.

The medium-term goal is for the glove to work with both the company's applications as well as those created by other developers. Therefore, API and SDK files must be released to the public, inviting developers to generate new apps that require the Power Claw.



Moreover, it is noteworthy that the device has limited power management, and the actuators consume too much electricity when switching between a hot and a cold sensation, so it is not yet feasible to use them wirelessly.

The project had the scientific backing of the University of Queretaro and Puebla (center states of Mexico) and from the Western Institute of Technology and Higher Education (ITESO). The product will be ready by mid-2016, but one can already pre-order it from their web site (www.vivoxie.com) for $399.

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