

Title (en)

DEVICE FOR GENERATING A HAPTICALLY PERCEPTIBLE REGION, AND CONFIGURATION AND CONTROL METHOD OF SUCH A DEVICE

Title (de)

VORRICHTUNG ZUR ERZEUGUNG EINES HAPTISCH WAHRNEHMBAREN BEREICHES SOWIE KONFIGURATIONS- UND STEUERVERFAHREN EINER SOLCHEN VORRICHTUNG

Title (fr)

DISPOSITIF DE GÉNÉRATION D'UNE ZONE PERCEPTIBLE HAPTIQUEMENT AINSI QUE PROCÉDÉ DE CONFIGURATION ET DE COMMANDE D'UN TEL DISPOSITIF

Publication

**EP 3894990 A1 20211020 (DE)**

Application

**EP 19813287 A 20191129**

Priority

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Abstract (en)

[origin: WO2020120165A1] The invention relates to a device for generating a haptically perceptible region of a virtual object within an interaction space, comprising a plurality of ultrasonic loudspeakers, the ultrasonic signals of which can be tuned for this purpose with respect to phase, frequency, and amplitude. The invention further relates to a method for configuring and controlling such a device. The aim of the invention is to provide a device and a method that allows a flexible adaptation of the interaction space to the space in which virtual objects are generated by way of an image generating device, and to simplify the configuring of the ultrasonic signals. This aim is achieved, according to the invention, in that individually or as a group, the ultrasonic loudspeakers form several modules, which can be positioned or are arranged on the interaction space in such a way that at least one loudspeaker of a module is oriented at an angle to at least one loudspeaker of another module, and/or at least one loudspeaker of a module is spaced apart from a common plane of other ultrasonic loudspeakers, and/or the modules are at a selectable distance to one another. This aim is further achieved in that for the configuration of the device, the modules successively emit defined test signals, which directly and/or after a reflection on one or more reflection bodies are registered by ultrasonic microphones, which are arranged directly on the modules or free in space such that from the run times and/or the intensities of the registered test signals, the relative positions and orientations of the modules and ultrasonic microphones result.

IPC 8 full level

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CPC (source: EP)

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