

Title (en)
ACOUSTIC SPACE CREATION APPARATUS

Title (de)
VORRICHTUNG ZUR ERZEUGUNG EINES AKUSTISCHEN RAUMES

Title (fr)
APPAREIL DE CRÉATION D'ESPACE ACOUSTIQUE

Publication
EP 4024391 A1 20220706 (EN)

Application
EP 19942900 A 20190830

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Abstract (en)
Provided is an apparatus that can more easily perform an improvisational performance based on a motion state of a user. An acoustic space creation apparatus includes a camera, a light source, an input unit, a processing unit, and a plurality of speakers. The camera captures an object. The light source irradiates the object. The input unit acquires images from the camera. The processing unit selects a sound to be generated corresponding to a frame of the video. The plurality of speakers output a sound selected by the processing unit. The processing unit compares a light amount in the frame with a light amount in a frame immediately before the frame and determines whether the object is in a motion state or a stop state based on a predetermined threshold for light amount. When the object is determined to be in a motion state, the processing unit generates a motion detection signal, selects a musical pitch to be output in accordance with a pre-stored musical structure program, allocates one of the plurality of speakers to each sound of the selected musical pitch in accordance with a pre-stored spatial structure program, and causes the allocated speaker to output the sound. When the motion state consecutively occurs a first predetermined number of times during a first unit time, the number of times of the consecutive occurrences for the first predetermined number of times reaches a second predetermined number of times, the object is determined to be in a motion state after having been in a stop state during a second unit time or greater, and a specific speaker among the plurality of speakers is allocated to a predetermined sound, the processing unit causes the specific speaker to generate a sine wave in accordance with the musical structure program. When the motion state consecutively occurs the first predetermined number of times during the first unit time, the number of times of the consecutive occurrences for the first predetermined number of times reaches a third predetermined number of times, the object is determined to be in a motion state after having been in a stop state during the second unit time or greater, and the specific speaker is allocated to the selected sound, the processing unit causes the specific speaker to output a first reverberation sound in accordance with the musical structure program. When the motion state consecutively occurs a fourth predetermined number of times during the first unit time, the processing unit causes the speaker to output a second reverberation sound in a predetermined order in accordance with the musical structure program.

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