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(54) Title: AN AUDIO PROCESSOR AND A METHOD CONSIDERING ACOUSTIC OBSTACLES AND PROVIDING LOUDSPEAKER SIGNALS

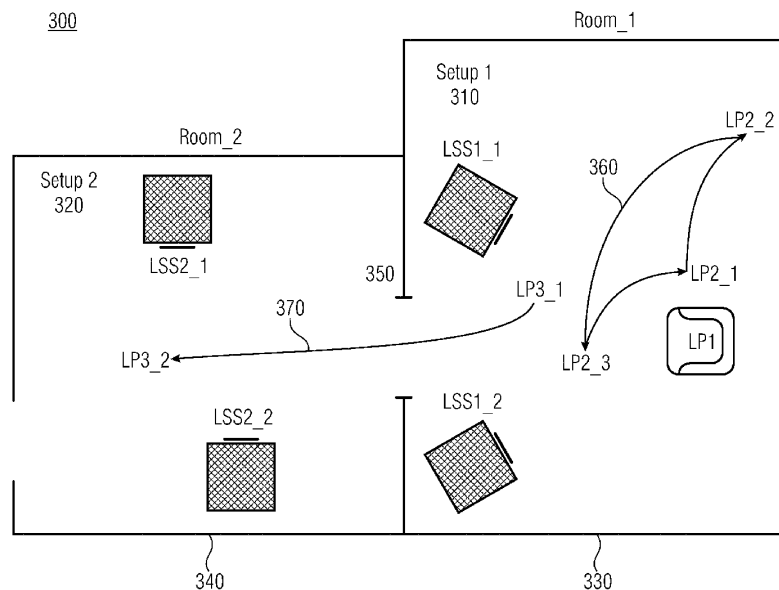


Fig. 3

(57) Abstract: An audio processor for providing a plurality of loudspeaker signals, or loudspeaker feeds, on the basis of a plurality of input signals, like channel signals and/or object signals. The audio processor is configured to obtain an information about the position of a listener. The audio processor is further configured to obtain an information about the position of a plurality of loudspeakers, or sound transducers, which may, for example, be placed within the same containment, e.g. a soundbar. The audio processor is further configured to select one or more loudspeakers for a rendering of the objects and/or of the channel objects and/or of the adapted signals, derived from the input signals, like channel signals or channel objects, or like upmixed or downmixed signals. The selection of the one or more loudspeakers depends on the information about the position of the listener, on the information about the positions of the loudspeakers and takes into consideration the information about one or more acoustic obstacles. In other words, the audio processor decides which

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loudspeakers should be used in the rendering of the different channel objects or adapted signals, taking into consideration, for example, the attenuation of the sound between the loudspeaker and the listener or an elongation of an acoustic path between a loudspeaker and the listener due to the properties of the obstacle. The audio signal processor is further configured to render the objects and/or the channel objects and/or the adapted signals derived from the input signals, in dependence on the information about the position of the listener and in dependence on the information about positions of the loudspeakers, in order to obtain the loudspeaker signals, such that a rendered sound follows a listener.