SYSTEM AND METHOD FOR ADAPTIVE AUDIO SIGNAL GENERATION, CODING AND RENDERING

ABSTRACT

Embodiments are described for an adaptive audio system that processes audio data comprising a number of independent monophonic audio streams. One or more of the streams has associated with it metadata that specifies whether the stream is a channel-based or object-based stream. Channel-based streams have rendering information encoded by means of channel name; and the object-based streams have location information encoded through location expressions encoded in the associated metadata. A codec packages the independent audio streams into a single serial bitstream that contains all of the audio data. This configuration allows for the sound to be rendered according to an allocentric frame of reference, in which the rendering location of a sound is based on the characteristics of the playback environment (e.g., room size, shape, etc.) to correspond to the mixer's intent. The object position metadata contains the appropriate allocentric frame of reference information required to play the sound correctly using the available speaker positions in a room that is set up to play the adaptive audio content.

Fig. 3