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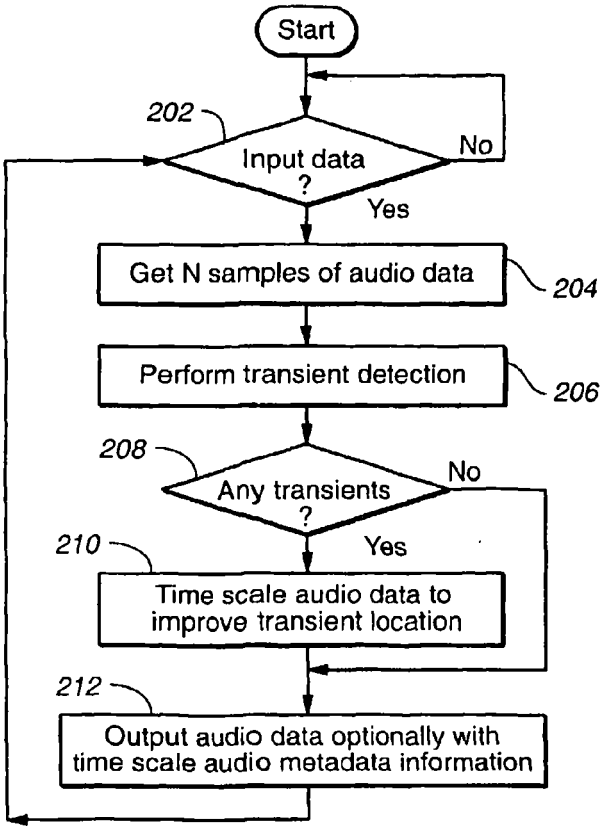
(54) Title: IMPROVING TRANSIENT PERFORMANCE OF LOW BIT RATE AUDIO CODING SYSTEMS BY REDUCING PRE-NOISE



(57) Abstract: Distortion artifacts preceding a signal transient in an audio signal stream processed by a transform-based low-bit-rate audio coding system employing coding blocks are reduced by detecting a transient in the audio signal stream and shifting the temporal relationship of the transient with respect to the coding blocks such that the time duration of the distortion artifacts is reduced. The audio data is time scaled in such a way that the transients are temporally repositioned prior to quantization in a transform-based low-bit-rate audio encoder so as to reduce the amount of pre-noise in the decoded audio signal. Alternatively, or in addition, in a transform-based low-bit-rate audio coding system, a transient in the audio signal stream is detected and a portion of the distortion artifacts are time compressed such that the time duration of the distortion artifacts is reduced.

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