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(54) **Title:** LOSSLESS MULTI-CHANNEL AUDIO CODEC USING ADAPTIVE SEGMENTATION WITH RANDOM ACCESS POINT (RAP) AND MULTIPLE PREDICTION PARAMETER SET (MPPS) CAPABILITY

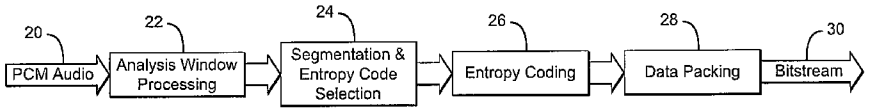


FIG. 2a

(57) **Abstract:** A lossless audio codec encodes/decodes a lossless variable bit rate (VBR) bitstream with random access point (RAP) capability to initiate loss less decoding at a specified segment within a frame and/or multiple prediction parameter set (MPPS) capability partitioned to mitigate transient effects. This is accomplished with an adaptive segmentation technique that fixes segment start points based on constraints imposed by the existence of a desired RAP and/or detected transient in the frame and selects a optimum segment duration in each frame to reduce encoded frame payload subject to an encoded segment payload constraint RAP and MPPS are particularly applicable to improve overall performance for longer frame durations.

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