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(54) Title: MULTI-CHANNEL SIGNAL GENERATOR, AUDIO ENCODER AND RELATED METHODS RELYING ON A MIXING NOISE SIGNAL

(57) Abstract: There is provided a multi-channel signal generator (200) for generating a multi-channel signal (204) having a first channel (201) and a second channel (203). The multi-channel signal generator (200) comprises: a first audio source (211) for generating a first audio signal (221); a second audio source (213) for generating a second audio signal (223); a mixing noise source (212) for generating a mixing noise signal (222); and a mixer (206) for mixing the mixing noise signal (222) and the first audio signal (221) to obtain the first channel (201) and for mixing the mixing noise signal (222) and the second audio signal (222) to obtain the second channel (203). There is also provided an audio encoder including: an activity detector (380) for analyzing a multi-channel signal (304) to determine (381) a frame of the sequence of frames to be an inactive frame (308); a noise parameter calculator (3040) calculating first parametric noise data (p_{noise} , $v_{\text{m, ind}}$) for a first channel (301, 201) of the multi-channel signal (304), and for calculating second parametric noise data (p_{noise} , $v_{\text{s, ind}}$) for a second channel (303) of the multi-channel signal (320); a coherence calculator (320) calculating coherence data (404, c) indicating a coherence situation between the first channel (301, 201) and the second channel (303, 203) in the inactive frame (308); and an output interface (310) generating the encoded multi-channel audio signal (232) having encoded audio data for the active frame (306) and, for the inactive frame (308), the first parametric noise data (p_{noise} , $v_{\text{m, ind}}$), the second parametric noise data (p_{noise} , $v_{\text{s, ind}}$), and/or a first linear combination of the first parametric noise data and the second parametric noise data, and the coherence data (c, 404).

WO 2022/042908 A1