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61/758,205 29 January 2013 (29.01.2013) US(71) Applicant: **FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.** [DE/DE]; Hansastraße 27c, 80686 München (DE).(72) Inventors: **DISCH, Sascha**; Wilhelmstrasse 70, 90766 Fürth (DE). **HELMRICH, Christian**; Hauptstraße 68, 91054 Erlangen (DE). **HILPERT, Johannes**; Herrnhüttestraße 46, 90411 Nürnberg (DE). **ROBILLIARD, Julien**; Fürther Straße 169, 90429 Nürnberg (DE). **SCHMIDT, Konstantin**; Heerwagenstrasse 21, 90489Nürnberg (DE). **WILDE, Stephan**; Sandrartstraße 4, 90419 Nürnberg (DE).(74) Agents: **BURGER, Markus** et al.; P.O. Box 246, 82043 Pullach (DE).

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(54) Title: AUDIO ENCODER, AUDIO DECODER, METHOD FOR PROVIDING AN ENCODED AUDIO INFORMATION, METHOD FOR PROVIDING A DECODED AUDIO INFORMATION, COMPUTER PROGRAM AND ENCODED REPRESENTATION USING A SIGNAL-ADAPTIVE BANDWIDTH EXTENSION

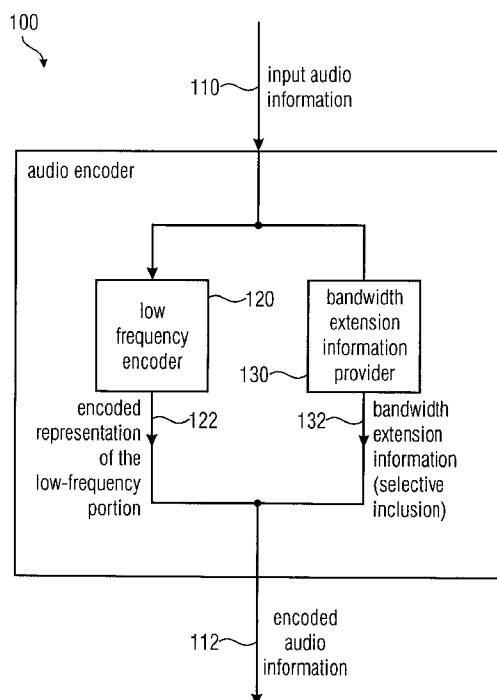


FIGURE 1

(57) Abstract: An audio encoder for providing an encoded audio information on the basis of an input audio information comprises a low frequency encoder configured to encode a low frequency portion of the input audio information to obtain an encoded representation of the low frequency portion, and a bandwidth extension information provider configured to provide bandwidth extension information on the basis of the input audio information. The audio encoder is configured to selectively include bandwidth extension information into the encoded audio information in a signal-adaptive manner. An audio decoder comprises a low frequency decoder configured to decode an encoded representation of a low frequency portion to obtain a decoded representation of the low frequency portion, and a bandwidth extension configured to obtain a bandwidth extension signal using a blind bandwidth extension for portions of an audio content for which no bandwidth extension parameters are included in the encoded audio information, and to obtain the bandwidth extension signal using a parameter-guided bandwidth extension for portions of the audio content for which bandwidth extension parameters are included in the encoded audio information.



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