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(54) Title: APPARATUS AND METHOD FOR ENCODING A PLURALITY OF AUDIO OBJECTS USING DIRECTION INFORMATION DURING A DOWNMIXING OR APPARATUS AND METHOD FOR DECODING USING AN OPTIMIZED COVARIANCE SYNTHESIS

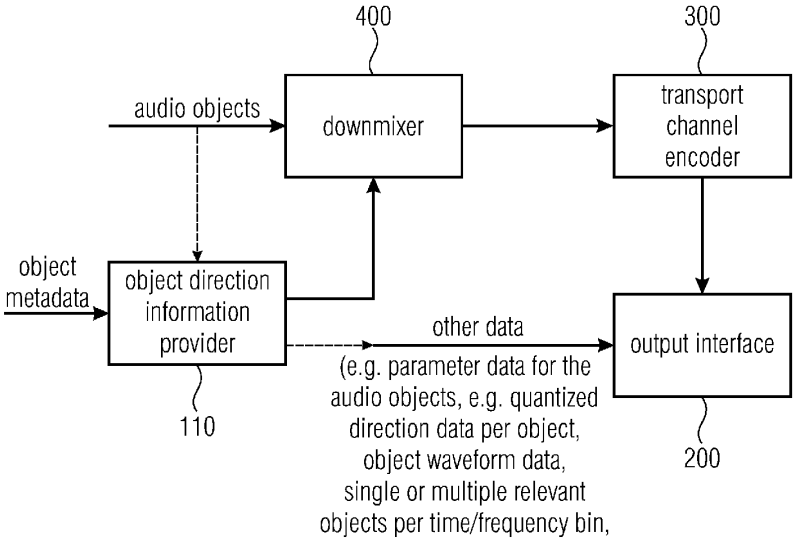

Fig. 1b

(57) Abstract: An apparatus for encoding a plurality of audio objects and related metadata indicating direction information on the plurality of audio objects, comprises: a downmixer (400) for downmixing the plurality of audio objects to obtain one or more transport channels; a transport channel encoder (300) for encoding one or more transport channels to obtain one or more encoded transport channels; and an output interface (200) for outputting an encoded audio signal comprising the one or more encoded transport channels, wherein the downmixer (400) is configured to downmix the plurality of audio objects in response to the direction information on the plurality of audio objects.

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