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(54) **Title:** APPARATUS, METHOD AND COMPUTER PROGRAM FOR ENCODING, DECODING, SCENE PROCESSING AND OTHER PROCEDURES RELATED TO DIRAC BASED SPATIAL AUDIO CODING USING LOW-ORDER, MID-ORDER AND HIGH-ORDER COMPONENTS GENERATORS

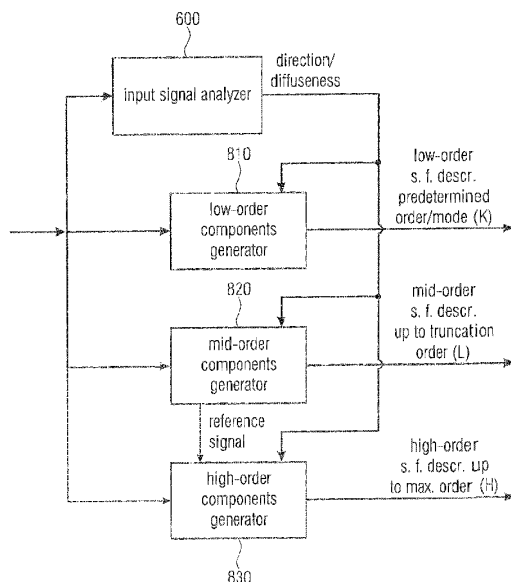


Fig. 8

(57) **Abstract:** An apparatus for generating a sound field description using an input signal comprising a mono-signal or a multi-channel signal comprises: an input signal analyzer (600) for analyzing the input signal to derive direction data and diffuseness data; a low-order components generator (810) for generating a low-order sound field description from the input signal up to a predetermined order and mode, wherein the low-order components generator is configured to derive the low-order sound field description by copying or taking the input signal or performing a weighted combination of the channels of the input signal; a mid-order components generator (820) for generating a mid-order sound field description above the predetermined order or at the predetermined order and above the predetermined mode and below or at a first truncation order using a synthesis of at least one direct portion and of at least one diffuse portion using the direction data and the diffuseness data so that the mid-order sound field description comprises a direct contribution and a diffuse contribution; and a high-order components generator (830) for generating a high-order sound field description having a component above the first truncation order using a synthesis of at least one direct portion, wherein the high order sound field description comprises a direct contribution only.

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