Apparatus and Method for Encoding and Decoding an Audio Signal Using Downsampling or Interpolation of Scale Parameters

Abstract

An apparatus for encoding an audio signal (160), comprises: a converter (100) for converting the audio signal into a spectral representation; a scale parameter calculator (110) for calculating a first set of scale parameters from the spectral representation: a downsampler (130) for downsampling the first set of scale parameters to obtain a second set of scale parameters, wherein a second number of scale parameters in the second set of scale parameters is lower than a first number of scale parameters in the first set of scale parameters; a scale parameter encoder (140) for generating an encoded representation of the second set of scale parameters; a spectral processor (120) for processing the spectral representation using a third set of scale parameters, the third set of scale parameters having a third number of scale parameters being greater than the second number of scale parameters, wherein the spectral processor (120) is configured to use the first set of scale parameters or to derive the third set of scale parameters from the second set of scale parameters or from the encoded representation of the second set of scale parameters using an interpolation operation; and an output interface (150) for generating an encoded output signal (170) comprising information on the encoded representation of the spectral representation and information on the encoded representation of the second set of scale parameters.

Figure 1