17

the at least one azimuth index and/or at least one elevation index of the frame uses a variably distributed bit allocation on a sub-band-by-sub-band basis.

According to a thirteenth aspect there is provided an apparatus comprising: receiving circuitry configured to receive values for sub-bands of a frame of an audio signal, the values comprising at least one azimuth value, at least one elevation value and at least one energy ratio value for each sub-band; allocation circuitry configured to determine an allocation of first number of bits to encode the values of the frame, wherein the first number of bits are fixed; encoding circuitry configured to encode the at least one energy ratio value of the frame based on a defined allocation of a second number of bits from the first number of bits; encoding circuitry configured to encode the at least one azimuth value and/or at least one elevation value of the frame based on a defined allocation of a third number of bits from the first number of bits, wherein the third number of bits is variably distributed on a sub-band-by-sub-band basis.

According to a fourteenth aspect there is provided an apparatus comprising: receiving circuitry configured to receive encoded values for sub-bands of a frame of an audio signal, the values comprising at least one azimuth index, at least one elevation index and at least one energy ratio value for each sub-band; decoding circuitry configured to decode the encoded values of the frame based on a defined allocation of bits wherein decoding the at least one azimuth index and/or at least one elevation index of the frame uses a variably distributed bit allocation on a sub-band-by-sub-band basis.

According to a fifteenth aspect there is provided a computer readable medium comprising program instructions for causing an apparatus to perform at least the following: receiving values for sub-bands of a frame of an audio signal, the values comprising at least one azimuth value, at least one elevation value and at least one energy ratio value for each sub-band; determining an allocation of first number of bits to encode the values of the frame, wherein the first number of bits are fixed; encoding the at least one energy ratio value of the frame based on a defined allocation of a second number of bits from the first number of bits; encoding the at least one azimuth value and/or at least one elevation value of the frame based on a