CLAIMS

1. An audio processing apparatus for decoding an encoded audio bitstream, the audio processing apparatus comprising:

a bitstream payload deformatter configured to demultiplex the encoded audio bitstream; and

a decoding subsystem coupled to the bitstream payload deformatter and configured to decode the encoded audio bitstream to generate an audio signal, wherein the audio signal comprises a lowband portion that is directly decoded from the encoded audio bitstream and a highband portion that is generated by the decoding subsystem, wherein the encoded audio bitstream includes:

a fill element with an identifier indicating a start of the fill element and fill data after the identifier, wherein the fill data includes:

at least one flag identifying whether a base form of spectral band replication or an enhanced form of spectral band replication is to be performed on audio content of the encoded audio bitstream, wherein the base form of spectral band replication includes spectral patching, the enhanced form of spectral band replication includes harmonic transposition, one value of the flag indicates that said enhanced form of spectral band replication should be performed on the audio content, and another value of the flag indicates that said base form of spectral band replication but not said harmonic transposition should be performed on the audio content,

wherein the spectral patching copies a number of adjacent quadrature mirror filter (QMF) subbands from a lowband portion of the audio signal to a highband portion of the audio signal.

2. The audio processing apparatus of claim 1, wherein the fill data further includes enhanced spectral band replication metadata.

3. The audio processing apparatus of claim 2, wherein the enhanced spectral band replication metadata are contained in an extension payload of a fill element.

4. The audio processing apparatus of claim 2, wherein the enhanced spectral band replication metadata include one or more parameters defining a master frequency band table.

5. The audio processing apparatus of claim 2, wherein the enhanced spectral band replication metadata include envelope scalefactors or noise floor scalefactors.

6. A method for decoding an encoded audio bitstream, the method comprising:

demultiplexing the encoded audio bitstream; and

decoding the encoded audio bitstream to generate an audio signal, wherein the audio signal comprises a lowband portion that is directly decoded from the encoded audio bitstream and a highband portion that is generated by the decoding subsystem,

wherein the encoded audio bitstream includes:

a fill element with an identifier indicating a start of the fill element and fill data after the identifier, wherein the fill data includes:

at least one flag identifying whether a base form of spectral band replication or an enhanced form of spectral band replication is to be performed on audio content of the encoded audio bitstream, wherein the base form of spectral band replication includes spectral patching, the enhanced form of spectral band replication includes harmonic transposition, one value of the flag indicates that said enhanced form of spectral band replication should be performed on the audio content, and another value of the flag indicates that said base form of spectral band replication but not said harmonic transposition should be performed on the audio content,

wherein the spectral patching copies a number of adjacent quadrature mirror filter (QMF) subbands from a lowband portion of the audio signal to a highband portion of the audio signal.

7. The method of claim 6, wherein the identifier is a three bit unsigned integer transmitted most significant bit first and having a value of 0x6.

8. The method of claim 6, wherein the fill data further includes enhanced spectral band replication metadata.

9. A non-transitory computer readable storage medium having stored thereon

program instructions that when executed by a processor cause the processor to perform the method of claim 6.