CLAIMS

1. A method of processing an audio signal, wherein the audio signal comprises a sequence of frames, each frame containing representations of a plurality of audio channels and reconstruction parameters for upmixing the plurality of audio channels to a predefined channel format, the method comprising:

receiving the audio signal; and

generating a reconstructed audio signal in the predefined channel format based on the received audio signal,

wherein generating the reconstructed audio signal comprises:

determining whether at least one frame of the audio signal has been lost; and

if a number of consecutively lost frames exceeds a first threshold, fading the reconstructed audio signal to a predefined spatial configuration.

2. The method according to claim 1, wherein the predefined spatial configuration corresponds to a spatially uniform audio signal; or

wherein the predefined spatial configuration corresponds to a predefined direction.

3. The method according to claim 1 or 2, wherein fading the reconstructed audio signal to the predefined spatial configuration involves linearly interpolating between a unit matrix and a target matrix indicative of the predefined spatial configuration, in accordance with a predefined fade-out time.

4. The method according to any one of claims 1 to 3, further comprising:

if the number of consecutively lost frames exceeds a second threshold that is greater than or equal to the first threshold, gradually fading out the reconstructed audio signal.

5. The method according to any one of claims 1 to 4, further comprising:

if at least one frame of the audio signal has been lost, generating estimations of the reconstruction parameters of the at least one lost frame based on the reconstruction parameters of an earlier frame; and

using the estimations of the reconstruction parameters of the at least one lost frame for generating the reconstructed audio signal of the at least one lost frame.

6. The method according to claim 5, wherein each reconstruction parameter is explicitly coded once every given number of frames in the sequence of frames and differentially coded between frames for the remaining frames; and

wherein estimating a given reconstruction parameter of a lost frame involves:

estimating the given reconstruction parameter of the lost frame based on the most recently determined value of the given reconstruction parameter; or

estimating the given reconstruction parameter of the lost frame based on the most recently determined values of one, two, or more reconstruction parameters other than the given reconstruction parameter.

7. The method according to claim 6, comprising:

determining a measure of reliability of the most recently determined value of the given reconstruction parameter; and

deciding, based on the measure of reliability, whether to estimate the given reconstruction parameter of the lost frame based on the most recently determined value of the given reconstruction parameter or based on the most recently determined values of the one, two, or more reconstruction parameters other than the given reconstruction parameter.

8. The method according to claim 6 or 7, comprising:

if the number of frames for which the value of the given reconstruction parameter could not be determined exceeds a third threshold, estimating the given reconstruction parameter of the lost frame based on the most recently determined values of the one, two, or more reconstruction parameters other than the given reconstruction parameter; and

otherwise, estimating the given reconstruction parameter of the lost frame based on the most recently determined value of the given reconstruction parameter.

9. The method according to any one of claims 5 to 8, wherein each frame contains reconstruction parameters relating to respective frequency bands, and wherein a given reconstruction parameter of the lost frame is estimated based on one or more reconstruction parameters relating to frequency bands different from a frequency band to which the given reconstruction parameter relates.

10. The method according to claim 9, wherein the given reconstruction parameter is estimated by interpolating between reconstruction parameters relating to frequency bands different from the frequency band to which the given reconstruction parameter relates.

11. The method according to claim 9 or 10, wherein the given reconstruction parameter is estimated by interpolating between reconstruction parameters relating to frequency bands neighboring the frequency band to which the given reconstruction parameter relates, or, if the frequency band to which the given reconstruction parameter relates has only one neighboring frequency band, by extrapolating from the reconstruction parameter relating to that neighboring frequency band.

12. An apparatus comprising a processor and a memory coupled to the processor and storing instructions for the processor, wherein the processor is configured to perform all steps of the method according to any one of claims 1 to 11.

13. A computer program comprising instructions that, when executed by a computing device, cause the computing device to perform all steps of the method according to any one of claims 1 to 11.

14. A computer-readable storage medium storing the computer program according to claim 13.