CLAIMS

1. A method for performing gain control on audio signals, the method comprising:

determining (502) downmixed signals associated with one or more downmix channels associated with a current frame of an audio signal to be encoded;

determining (504) whether an overload condition exists for an encoder to be used to encode the downmixed signals for at least one of the one or more downmix channels;

responsive to determining that the overload condition exists, determining (506) a gain parameter for the at least one of the one or more downmix channels for the current frame of the audio signal;

determining (508) at least one gain transition function based on the gain parameter and a gain parameter associated with a preceding frame of the audio signal;

applying (510) the at least one gain transition function to one or more of the downmixed signals; and

encoding (512) the downmixed signals with the at least one gain transition function applied in connection with information indicative of gain control applied to the current frame;

wherein the at least one gain transition function comprises a transitory portion and a steady-state portion, and wherein the transitory portion corresponds to a transition from the gain parameter associated with the preceding frame of the audio signal to the gain parameter associated with the current frame of the audio signal; wherein a duration of the transitory portion relates to a delay introduced by a codec comprising the encoder, and wherein the duration of the transitory portion is the frame length minus the codec delay.

2. An apparatus configured for implementing the method of claim 1.

3. One or more non-transitory media having software stored thereon, the software including instructions for controlling one or more devices to perform the method of claim 1.