## Claims

1. An apparatus for generating an audio signal envelope from one or more coding values, comprising:

an input interface ~~(1610)~~ for receiving the one or more coding values, and

an envelope generator ~~(1620)~~ for generating the audio signal envelope depending on the one or more coding values,

wherein the envelope generator ~~(1620)~~ is configured to generate an aggregation function depending on the one or more coding values, wherein the aggregation function comprises a plurality of aggregation points, wherein each of the aggregation points comprises an argument value and an aggregation value, wherein the aggregation function monotonically increases, and wherein each of the one or more coding values indicates at least one of the argument value and the aggregation value of one of the aggregation points of the aggregation function,

wherein the envelope generator ~~(1620)~~ is configured to generate the audio signal envelope such that the audio signal envelope comprises a plurality of envelope points, wherein each of the envelope points comprises an argument value and an envelope value, and wherein, for each of the aggregation points of the aggregation function, one of the envelope points of the audio signal envelope is assigned to said aggregation point such that the argument value of said envelope point is equal to the argument value of said aggregation point, and

wherein the envelope generator ~~(1620)~~ is configured to generate the audio signal envelope such that the envelope value of each of the envelope points of the audio signal envelope depends on the aggregation value of at least one aggregation point of the aggregation function.

2. An apparatus according to claim 1, wherein the envelope generator ~~(1620)~~ is configured to determine the aggregation function by determining one of the aggregation points for each of the one or more coding values depending on said coding value, and by applying interpolation to obtain the aggregation function depending on the aggregation point of each of the one or more coding values.

3. An apparatus according to claim 1 or 2, wherein the envelope generator ~~(1620)~~ is configured to determine a first derivate of the aggregation function at a plurality of the aggregation points of the aggregation function.

4. An apparatus according to one of the preceding claims, wherein the envelope generator ~~(1620)~~ is configured to generate the aggregation function depending on the coding values so that the aggregation function has a continuous first derivative.

5. An apparatus according to one of the preceding claims, wherein the envelope generator ~~(1620)~~ is configured to determine the audio signal envelope by determining a ratio of a first difference and a second difference, said first difference being a difference between a first aggregation value ~~(c(k+1))~~ of a first one of the aggregation points of the aggregation function and a second aggregation value ~~(c(k-1); c(k))~~ of a second one of the aggregation points of the aggregation function, and said second difference being a difference between a first argument value ~~(f(k+1))~~ of said first one of the aggregation points of the aggregation function and a second argument value ~~(f(k-1); f(k))~~ of said second one of the aggregation points of the aggregation function.

6. An apparatus according to claim 5, wherein the envelope generator ~~(1620)~~ is configured to determine the audio signal envelope by applying

$$tilt(k) = \frac{c(k+1) - c(k-1)}{f(k+1) - f(k-1)}$$

wherein $tilt(k)$ indicates a derivative of the aggregation function at the $k$-th coding value,

wherein $c(k+1)$ is said first aggregation value,

wherein $f(k+1)$ is said first argument value,

wherein $c(k-1)$ is said second aggregation value,

wherein $f(k-1)$ is said second argument value,

wherein $k$ is an integer indicating an index of one of the one or more coding values,

wherein $c(k+1)-c(k-1)$ is the first difference of the two aggregated values $c(k+1)$ and $c(k-1)$, and

wherein $f(k+1)-f(k-1)$ is the second difference of the two argument values $f(k+1)$ and $f(k-1)$.

7. An apparatus according to claim 5, wherein the envelope generator ~~(1620)~~ is configured to determine the audio signal envelope by applying

$$tilt(k) = 0.5 \cdot \left( \frac{c(k+1)-c(k)}{f(k+1)-f(k)} + \frac{c(k)-c(k-1)}{f(k)-f(k-1)} \right)$$

wherein $tilt(k)$ indicates a derivative of the aggregation function at the $k$-th coding value,

wherein $c(k+1)$ is said first aggregation value,

wherein $f(k+1)$ is said first argument value,

wherein $c(k)$ is said second aggregation value,

wherein $f(k)$ is said second argument value,

wherein $c(k-1)$ is a third aggregation value of a third one of the aggregation points of the aggregation function,

wherein $f(k-1)$ is a third argument value of said third one of the aggregation points of the aggregation function,

wherein $k$ is an integer indicating an index of one of the one or more coding values,

wherein $c(k+1)-c(k)$ is the first difference of the two aggregated values $c(k+1)$ and $c(k)$, and

wherein $f(k+1)-f(k)$ is the second difference of the two argument values $f(k+1)$ and $f(k)$.

8. An apparatus according to one of the preceding claims,

wherein the input interface ~~(1610)~~ is configured to receive one or more splitting values as the one or more coding values,

wherein the envelope generator ~~(1620)~~ is configured to generate the aggregation function depending on the one or more splitting values, wherein each of the one or more splitting values indicates the aggregation value of one of the aggregation points of the aggregation function,

wherein the envelope generator ~~(1620)~~ is configured to generate the reconstructed audio signal envelope such that the one or more splitting points divide the reconstructed audio signal envelope into two or more audio signal envelope portions, wherein a predefined assignment rule defines a signal envelope portion value for each signal envelope portion of the two or more signal envelope portions depending on said signal envelope portion, and

wherein the envelope generator ~~(1620)~~ is configured to generate the reconstructed audio signal envelope such that, for each of the two or more signal envelope portions, an absolute value of its signal envelope portion value is greater than half of an absolute value of the signal envelope portion value of each of the other signal envelope portions.

9. An apparatus for determining one or more coding values for encoding an audio signal envelope, comprising:

an aggregator ~~(1710)~~ for determining an aggregated value for each of a plurality of argument values, wherein the plurality of argument values are ordered such that a first argument value of the plurality of argument values either precedes or succeeds a second argument value of the plurality of argument values, when said second argument value is different from the first argument value, wherein an envelope value is assigned to each of the argument values, wherein the envelope value of each of the argument values depends on the audio signal envelope, and wherein the aggregator ~~(1710)~~ is configured to determine the aggregated value for each argument value of the plurality of argument values depending on the envelope value of said argument value, and depending on the envelope value of each of the plurality of argument values which precede said argument value, and

an encoding unit ~~(1720)~~ for determining one or more coding values depending on one or more of the aggregated values of the plurality of argument values.

10. An apparatus according to claim 9, wherein the aggregator ~~(1710)~~ is configured to determine the aggregated value for each argument value of the plurality of argument values by adding the envelope value of said argument value and the envelope values of the argument values which precede said argument value.

11. An apparatus according to claim 9 or 10, wherein the envelope value of each of the argument values indicates an n-th power of a spectral value of an audio signal envelope having the audio signal envelope as signal envelope, wherein n is an even integer greater zero.

12. An apparatus according to claim 9 or 10, wherein the envelope value of each of the argument values indicates an n-th power of an amplitude value of an audio signal envelope, being represented in a time domain, and having the audio signal envelope as signal envelope, wherein n is an even integer greater zero.

13. An apparatus according to one of claims 9 to 12, wherein the encoding unit ~~(1720)~~ is configured to determine the one or more coding values depending on one or more of the aggregated values of the argument values, and depending on a coding values number, which indicates how many values are to be determined by the encoding unit ~~(1720)~~ as the one or more coding values.

14. An apparatus according to claim 13, wherein the coding unit is configured to determine the one or more coding values according to

$$c(k) = \min_j \left( \left| a(j) - k\frac{\max(a)}{N} \right| \right) ,$$

wherein $c(k)$ indicates the $k$-th coding value to be determined by the coding unit,

wherein $j$ indicates the $j$-th argument value of the plurality of argument values,

wherein $a(j)$ indicates the aggregated value being assigned to the $j$-th argument value,

wherein $\max(a)$ indicates a maximum value being one of the aggregated values which are assigned to one of the argument values, wherein none of the aggregated values which are assigned to one of the argument values is greater than the maximum value, and

wherein $\min_j\left(\left| a(j)-k\frac{\max(a)}{N}\right|\right)$ indicates a minimum value being one of the argument values for which $\left| a(j)-k\frac{\max(a)}{N}\right|$ is minimal.

15. A method for generating an audio signal envelope from one or more coding values, comprising:

receiving the one or more coding values, and

generating the audio signal envelope depending on the one or more coding values,

wherein generating the audio signal envelope is conducted by generating an aggregation function depending on the one or more coding values, wherein the aggregation function comprises a plurality of aggregation points, wherein each of the aggregation points comprises an argument value and an aggregation value, wherein the aggregation function monotonically increases, and wherein each of the one or more coding values indicates at least one of the argument value and the aggregation value of one of the aggregation points of the aggregation function,

wherein generating the audio signal envelope is conducted such that the audio signal envelope comprises a plurality of envelope points, wherein each of the envelope points comprises an argument value and an envelope value, and wherein, for each of the aggregation points of the aggregation function, one of the envelope points of the audio signal envelope is assigned to said aggregation point such that the argument value of said envelope point is equal to the argument value of said aggregation point, and

wherein generating the audio signal envelope is conducted such that the envelope value of each of the envelope points of the audio signal envelope depends on the aggregation value of at least one aggregation point of the aggregation function.

16. A method for determining one or more coding values for encoding an audio signal envelope, comprising:

determining an aggregated value for each of a plurality of argument values, wherein the plurality of argument values are ordered such that a first argument value of the plurality of argument values either precedes or succeeds a second argument value of the plurality of argument values, when said second argument value is different from the first argument value, wherein a envelope value is assigned to each of the argument values, wherein the envelope value of each of the argument values depends on the audio signal envelope, and wherein the aggregator ~~(1710)~~ is configured to determine the aggregated value for each argument value of the plurality of argument values depending on the envelope value of said argument value, and depending on the envelope value of each of the plurality of argument values which precede said argument value, and

determining one or more coding values depending on one or more of the aggregated values of the plurality of argument values.

17. A computer program for implementing the method of claim 15 or 16 when being executed on a computer or signal processor.