Claims

1. Information signal reconstructor configured to reconstruct, using aliasing cancellation, an information signal from a lapped transform representation of the information signal comprising, for each of consecutive, overlapping regions of the information signal, a transform of a windowed version of the respective region, wherein the information signal reconstructor is configured to reconstruct the information signal at a sample rate which changes at a border ~~(82)~~ between a preceding region ~~(84)~~ and a succeeding region ~~(86)~~ of the information signal, the information signal reconstructor comprises

   a retransformer ~~(70)~~ configured to apply a retransformation on the transform ~~(94)~~ of the windowed version of the preceding region ~~(84)~~ so as to obtain a retransform ~~(96)~~ for the preceding region ~~(84)~~, and apply a retransformation on the transform of the windowed version of the succeeding region ~~(86)~~ so as to obtain a retransform ~~(100)~~ for the succeeding region ~~(86)~~, wherein the retransform ~~(96)~~ for the preceding region ~~(84)~~ and the retransform ~~(106)~~ for the succeeding region ~~(86)~~ overlap at an aliasing cancellation portion ~~(102)~~ at the border ~~(82)~~ between the preceding and succeeding regions;

   a resampler ~~(72)~~ configured to resample, by interpolation, the retransform ~~(96)~~ for preceding region ~~(84)~~ and/or the retransform ~~(100)~~ for the succeeding region ~~(86)~~ at the aliasing cancellation portion ~~(102)~~ according to a sample rate change at the border ~~(82)~~; and

   a combiner ~~(74)~~ configured to perform aliasing cancellation between the retransforms ~~(96, 100)~~ for the preceding and succeeding regions ~~(84, 86)~~ as obtained by the resampling at the aliasing cancellation portion ~~(102)~~.

2. Information signal reconstructor according to claim 1, wherein the resampler is configured to resample the retransform ~~(96)~~ for the preceding region at the aliasing cancellation portion according to the sample rate change at the border.

3. Information signal reconstructor according to claim 1 or 2, wherein a ratio of a transform length of the retransformation applied to the transform ~~(94)~~ of the windowed version of the preceding region ~~(84)~~ to a temporal length of the preceding region ~~(84)~~ differs from a ratio of a transform length of the retransformation applied to the windowed version of the succeeding region ~~(86)~~ to a

temporal length of the succeeding region ~~(86)~~ by a factor corresponding to the sample rate change.

4. Information signal reconstructor according to claim 3, wherein the temporal lengths of the preceding and succeeding regions ~~(84, 86)~~ are equal to each other, and the retransformer ~~(70)~~ is configured to restrict the application of the retransformation on the transform of the windowed version of the preceding region ~~(84)~~ to a low-frequency portion of the transform of the windowed version of the preceding region and/or restrict the application of the retransformation on the transform of the windowed version of the succeeding region on a low-frequency portion of the transform of the windowed version of the succeeding region.

5. Information signal reconstructor according to any of claims 1 to 4, wherein a transform length of the transform of the windowed version of the regions of the information signal and a temporal length of the regions of the information signal are constant, and the information signal reconstructor is configured to locate the border ~~(82)~~ responsive to a control signal ~~(98)~~.

6. Resampler composed of a concatenation of a filterbank ~~(38)~~ for providing a lapped transform representation of an information signal, and an inverse filterbank ~~(42)~~ comprising an information signal reconstructor ~~(80)~~ configured to reconstruct, using aliasing cancellation, the information signal from the lapped transform representation of the information signal according to claim 5.

7. Information signal encoder comprising a resampler according to claim 6 and a compression stage ~~(16)~~ configured to compress the reconstructed information signal, the information signal encoder further comprising a sample rate control configured to control the control signal ~~(98)~~ depending on an external information on available transmission bitrate.

8. Information signal reconstructor according to any of claims 1 to 4, wherein the transform length of the transform of the windowed version of the regions of the information signal varies, while a temporal length of the regions of the information signal is constant, wherein the information signal reconstructor is configured to locate the border ~~(82)~~ by detecting a change in the transform length of the windowed version of the regions of the information signal.

9. Information signal reconstructor according to claim 8, wherein the retransformer is configured to adapt a transform length of the retransformation applied on the transform of the windowed version of the preceding and succeeding regions to the transform length of the transform of the windowed version of the preceding and succeeding regions.

10. Information signal reconstructor comprising a decompressor ~~(34)~~ configured to reconstruct a lapped transform representation of an information signal from a data stream, and an information signal reconstructor according to claim 9 configured to reconstruct, using aliasing cancellation, the information signal from the lapped transform representation.

11. Information signal reconstructor according to any of claims 1 to 5, 8, and 9, wherein the lapped transform is critically sampled such as an MDCT.

12. Information signal reconstructor according to any of claims 1 to 5, 8, and 9, wherein the lapped transform representation is a complex valued filterbank.

13. Information signal reconstructor according to any of claims 1 to 5, 8, 9, 11 and 12, wherein resampler is configured to use a linear or spline interpolation for the interpolation.

14. Information signal reconstructor according to any of claims 1 to 5, 8, 9, 11 and 12, wherein the sample rate decreases at the border ~~(82)~~ and the retransformer ~~(70)~~ is configured to, in applying the retransformation on the transform ~~(94)~~ of the windowed version of the preceding region ~~(84)~~, attenuate, or set to zero, higher frequencies of the transform ~~(94)~~ of the windowed version of the preceding region ~~(84)~~.

15. Information signal transformer configured to generate a lapped transform representation of an information signal using an aliasing-causing lapped transform, comprising

an input ~~(105)~~ for receiving the information signal in the form of a sequence of samples;

a grabber ~~(106)~~ configured to grab consecutive, overlapping regions of the information signal;

a resampler ~~(107)~~ configured to apply, by interpolation, a resampling onto at least a subset of the consecutive, overlapping regions of the information signals so that each of the consecutive, overlapping portions has a respective constant sample rate, but the respective constant sample rate varies among the consecutive, overlapping regions;

a windower ~~(108)~~ configured to apply a windowing on the consecutive, overlapping regions of the information signal; and

a transformer ~~(109)~~ configured to individually apply a transform on the windowed regions.

16. Information signal transformer according to claim 15, wherein the grabber ~~(106)~~ is configured to perform the grabbing of the consecutive, overlapping regions of the information signal such that the consecutive, overlapping regions of the information signal are of constant time length.

17. Information signal transformer according to claim 15 or 16, wherein the grabber ~~(106)~~ is configured to perform the grabbing of the consecutive, overlapping regions of the information signal such that the consecutive, overlapping regions of the information signal have a constant time offset.

18. Information signal transformer according to claim 16 or 17, wherein the sequence of samples has a varying sample rate switching from a first sample rate to a second sample rate at a predetermined time instant ~~(113)~~, wherein the resampler ~~(107)~~ is configured to apply the resampling onto the consecutive, overlapping regions ~~(114b,c)~~ overlapping with the predetermined time instant so that the constant sample rate thereof switches merely once from the first sample rate to the second sample rate.

19. Information signal transformer according to claim 18, wherein the transformer is configured to adapt a transform length of the transform of each windowed region to a number of samples of the respective windowed region.

20. Method for reconstructing, using aliasing cancellation, an information signal from a lapped transform representation of the information signal comprising, for each of consecutive, overlapping regions of the information signal, a transform of a

windowed version of the respective region, wherein the information signal reconstructor is configured to reconstruct the information signal at a sample rate which changes at a border ~~(82)~~ between a preceding region ~~(84)~~ and a succeeding region ~~(86)~~ of the information signal, the method comprising

applying a retransformation on the transform ~~(94)~~ of the windowed version of the preceding region ~~(84)~~ so as to obtain a retransform ~~(96)~~ for the preceding region ~~(84)~~, and apply a retransformation on the transform of the windowed version of the succeeding region ~~(86)~~ so as to obtain a retransform ~~(100)~~ for the succeeding region ~~(86)~~, wherein the retransform ~~(96)~~ for the preceding region ~~(84)~~ and the retransform ~~(106)~~ for the succeeding region ~~(86)~~ overlap at an aliasing cancellation portion ~~(102)~~ at the border ~~(82)~~ between the preceding and succeeding regions;

resampling, by interpolation, the retransform ~~(96)~~ for preceding region ~~(84)~~ and/or the retransform ~~(100)~~ for the succeeding region ~~(86)~~ at the aliasing cancellation portion ~~(102)~~ according to a sample rate change at the border ~~(82)~~; and

performing aliasing cancellation between the retransforms ~~(96, 100)~~ for the preceding and succeeding regions ~~(84, 86)~~ as obtained by the resampling at the aliasing cancellation portion ~~(102)~~.

21. Method for generating a lapped transform representation of an information signal using an aliasing-causing lapped transform, comprising

receiving the information signal in the form of a sequence of samples;

grabbing consecutive, overlapping regions of the information signal;

applying, by interpolation, a resampling onto at least a subset of the consecutive, overlapping regions of the information signals so that each of the consecutive, overlapping portions has a respective constant sample rate, but the respective constant sample rate varies among the consecutive, overlapping regions;

applying a windowing on the consecutive, overlapping regions of the information signal; and

individually applying a transformation on the windowed regions.

22. Computer program having a program code for performing, when running on a computer, a method according to claim 20 ro 21.