CLAIMS

1. A method for decoding descriptive information for each element of a given set of elements, said set of elements corresponding to a sample of a signal with one or more dimensions, the method comprising:

receiving zone information ~~specifying~~ indicating which~~multiple~~ elements of ~~the~~a rendition of the signal belong~~ing~~ to a zone, wherein a zone comprises one or more regions of the rendition of the sample of the signal characterized by the elements in said one or more regions having common properties;

receiving descriptive information associated with the zone, the descriptive information associated with said common properties and encoded to indicate information pertaining to the multiple elements in the zone; and

for each respective element in the zone, utilizing the descriptive information to derive a corresponding value, the corresponding value indicating information pertaining to the respective element.

2. The method according to claim 1, wherein descriptive information corresponds to information on motion of zones and descriptive information is processed in order to generate a motion-compensated image, the method comprising:

a. receiving at least one motion zone, said motion zone indicating a subset of elements of a motion-compensated image, said subset of elements belonging to said motion zone, and at least one set of descriptive information on motion,

b. receiving at least a first reference image,

c. computing a second image, in particular a motion-compensated image, by using the first image received during phase (b), the motion zones received during phase (a) and the descriptive information on motion received during phase (a),

3. The method according to claim 2, wherein a first motion zone corresponds to a subset of elements characterized by a number of elements that is different from the number of elements corresponding to a second motion zone, and at least one of the motion zones comprises elements that correspond to non-rectangular and/or non-contiguous portions of

the signal.

4. The method according to claim 2, wherein the motion of a motion zone comprises a

point numbers), in order to describe movements with arbitrary precision and access ~~substantially~~ any location of the reference image independently of the actual resolution of the reference image.

11. The method according to claim 10, wherein the value of at least a given element of the motion-compensated image is calculated by performing a weighted average of a subset of elements of the reference image, wherein the weights of the weighted average depend on the coordinates of the given element in the motion-compensated image and on descriptive information of the motion of the one or more motion zone(s) to which the given element belongs.

12. The method according to claim 2, wherein elements of the motion-compensated image corresponding to at least one zone are assigned values that are not based on values of elements of the reference image.

13. The method according to claims 2, wherein motion zones are encoded as a single auxiliary image corresponding to the given motion-compensated image to compute, wherein the values assigned to elements of the auxiliary image correspond to the motion zone associated to corresponding elements of the given motion-compensated image.

14. The method according to claim 13, wherein said single auxiliary image is decoded with a tier-based hierarchical method, the method comprising:

decoding a rendition of the single auxiliary image at a first level of quality;

based at least in part on said single auxiliary image at a first level of quality, producing a preliminary rendition of the single auxiliary image at a second level of quality, the second level of quality being higher than the first level of quality;

decoding a set of adjustment values;

combining said preliminary rendition of the single auxiliary image at the second level of quality with said adjustment values, producing a rendition of the single auxiliary image at the second level of quality.

20. A computer program directly loadable into an internal memory of a digital processor, comprising software code portions for performing the phases of claim 1 when said program is run on a processor.

21. Decoder processing hardware implementing the method according to claim 1 and executing the computer program according to claim 1.

22. A method to reproduce a rendition of a signal, the method comprising:
via computer processor hardware:
receiving zone information indicating which elements of a rendition of the signal belong to a zone, wherein a zone comprises one or more regions of the rendition of the sample of the signal characterized by the elements in said one or more regions having common properties~~specifying multiple elements of the rendition of the signal belonging to a zone~~;
receiving motion information associated with the zone, the motion information associated with said common properties and encoded to indicate to which corresponding element in a reference signal each of the multiple elements in the zone pertains; and
for each respective element in the zone, utilizing the motion information to derive a corresponding location value in the reference signal, the corresponding location value indicating a location in the reference signal to which the respective element pertains.

23. The method as in claim 22 further comprising:
for each respective element in the zone:
utilizing the location value for the respective element to select a corresponding group of elements in the reference signal; and
calculating a setting for the respective element, the setting for the respective element derived based on settings of elements in the corresponding group.

24. The method as in claim 23, wherein the motion information includes a set of coefficient values; and
wherein utilizing the motion information to derive a corresponding location value includes:

obtaining coordinates for the respective element, the coordinates specifying a location of the respective element in rendition of the signal; and

32. The method as in claim 22, wherein the rendition of the signal is a motion compensated image; and

wherein a region of the motion compensated image as represented by the zone of elements is a non-rectangular shape.

33. The method as in claim 22, wherein a resolution of the rendition of the signal is ~~substantially~~ different than a resolution of the reference signal.

34. The method as in claim 22, wherein a resolution of the rendition of the signal is ~~substantially~~ the same such as a resolution of the reference signal.

35. The method as in claim 22, wherein the motion information includes offset adjustment information; and

wherein utilizing the motion information to derive a corresponding location value for the respective element includes: i) obtaining coordinates for the respective element, the coordinates specifying a location of the respective element in rendition of the signal; and ii) applying the offset adjustment information to the coordinates to produce the corresponding location information for the respective element, the corresponding location information indicating a location that is offset with respect to the coordinates by an amount as specified by the offset adjustment information.

36. The method as in claim 22, wherein the motion information includes rotation adjustment information; and

wherein utilizing the motion information to derive a corresponding location value for the respective element includes: i) obtaining coordinates for the respective element, the coordinates specifying a location of the respective element in rendition of the signal; and ii) applying the rotation adjustment information to the coordinates to produce the corresponding location information for the respective element, the corresponding location information capturing a rotation of the coordinates by an amount as specified by the

via computer processor hardware:

receiving zone information indicating which elements of a rendition of the signal belong to a zone, wherein a zone comprises one or more regions of the rendition of the sample of the signal characterized by the elements in said one or more regions having common properties~~specifying multiple elements of the rendition of the signal belonging to a zone~~;

receiving descriptive information associated with the zone, the descriptive information associated with said common properties and encoded to indicate information pertaining to the multiple elements in the zone; and

for each respective element in the zone, utilizing the descriptive information to derive a corresponding value, the corresponding value indicating information pertaining to the respective element.