The state of the signal flag may indicate one of: a direction value for the time frame of the audio object differs from a direction value for the previous time frame of the audio object; or a direction value for the time frame of the audio object is the same as a direction value for the previous time frame of the audio object;

The de-quantizer maybe a spherical grid quantizer wherein the spherical grid is formed by covering the sphere with smaller spheres, wherein the smaller spheres define the points of the spherical grid.

According to an example there is provided an apparatus comprising at least one processor and at least one memory storing instructions that, when executed by the at least one processor, cause the system at least to: receive a direction value for a time frame of an audio object; compare, as a first comparison, a bit allocation against a threshold bit allocation value; depending on the first comparison, either quantize the direction value for the time frame of the audio object with a quantizer according to the bit allocation, or compare, as a second comparison, the direction value for the time frame of the audio object with a direction value for a previous time frame of the audio object; and depending on the second comparison quantize the direction value for the time frame with the quantizer according to the bit allocation and signal the second comparison.

According to an example there is provided an apparatus comprising at least one processor and at least one memory storing instructions that, when executed by the at least one processor, cause the system at least to: compare a bit allocation for a direction value index for a time frame of an audio object against a threshold bit allocation value; depending on the comparison, either decode the direction value index for the time frame of the audio object with a de-quantizer according to the bit allocation, or read a state of a signal flag associated with the direction value index for the time frame of the audio object; and depending on the state of the signal flag; either set a quantized direction value for the time frame of the audio object to be a quantized direction value for a previous time frame of the audio object, or decode the direction value index for the time frame of the audio object with a de-quantizer