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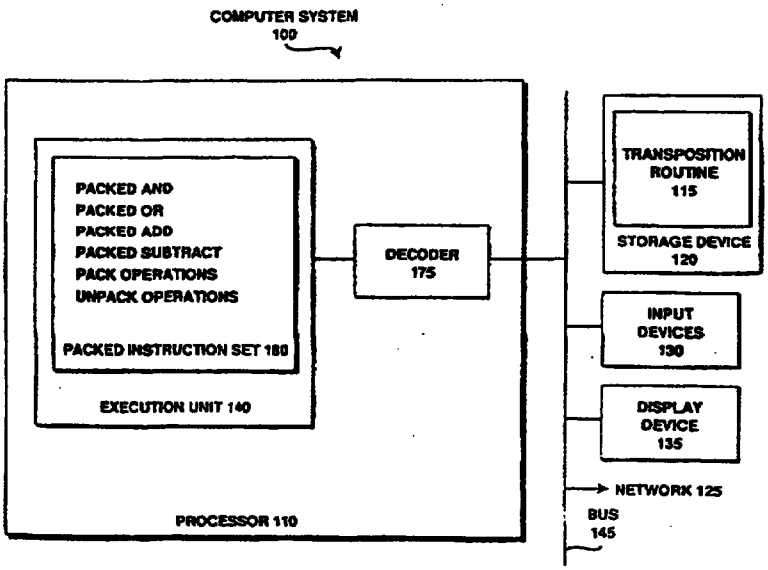
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(54) Title: MANIPULATING VIDEO AND AUDIO SIGNALS USING A PROCESSOR WHICH SUPPORTS SIMD INSTRUCTIONS



(57) Abstract

A computer system (100) which manipulates audio and video signals. A multimedia input device (130) which generates an audio and/or video signal is coupled to a processor (110). The processor is also coupled to a storage device (120) upon which a decompression routine is stored, the decompression routine including a transposition routine (115). The transposition routine manipulates data elements associated with the audio or video signal is transposing an array of n rows of a plurality of data elements. The transposition routine causes the processor to interleave data elements from a first row with data elements from a second row to generate a first result. Data elements from a third row are interleaved with data elements from a fourth row to generate a second result. Then, data elements from the first result are interleaved with data elements from the second result to generate a third result.