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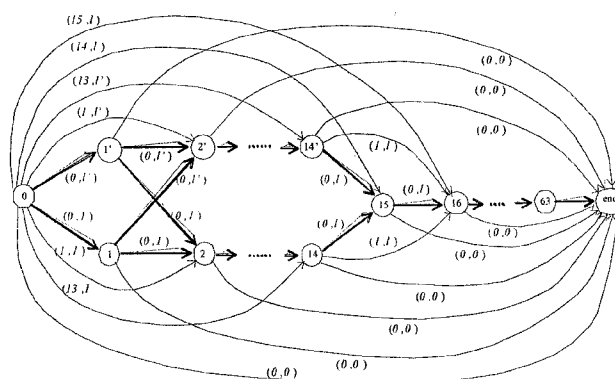
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(54) Title: METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT FOR OPTIMIZATION OF DATA COMPRESSION



(57) Abstract: A sequence of n coefficients is compressed by determining a cost-determined sequence of n coefficient indices represented by a cost-determined sequence of (run, index derivative) pairs under a given quantization table and run-index derivative coding distribution, wherein each sequence of (run, index derivative) pairs defines a corresponding sequence of coefficient indices such that (i) each index in the corresponding sequence of coefficient indices is a digital number, (ii) the corresponding sequence of coefficient indices includes a plurality of values including a special value, and (iii) each (run, index derivative) pair defines a run value representing a number of consecutive indices of the special value, and an index-based value derived from a value of the index following the number of consecutive indices of the special value. This involves (a) using the given quantization table and run-index derivative coding distribution to formulate a cost function for a plurality of possible sequences of (run, index derivative) pairs; (b) applying the cost function to each possible sequence in the plurality of possible sequences of (run, index derivative) pairs to determine an associated cost; and, (c) selecting the cost-determined sequence of (run, index derivative) pairs from the plurality of possible sequences of (run, index derivative) pairs based on the associated cost of each of the plurality of possible sequences of (run, index derivative) pairs; and encoding the corresponding selected cost-determined sequence of (run, index derivative) pairs using entropy coding based on a run-index derivative coding distribution.



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