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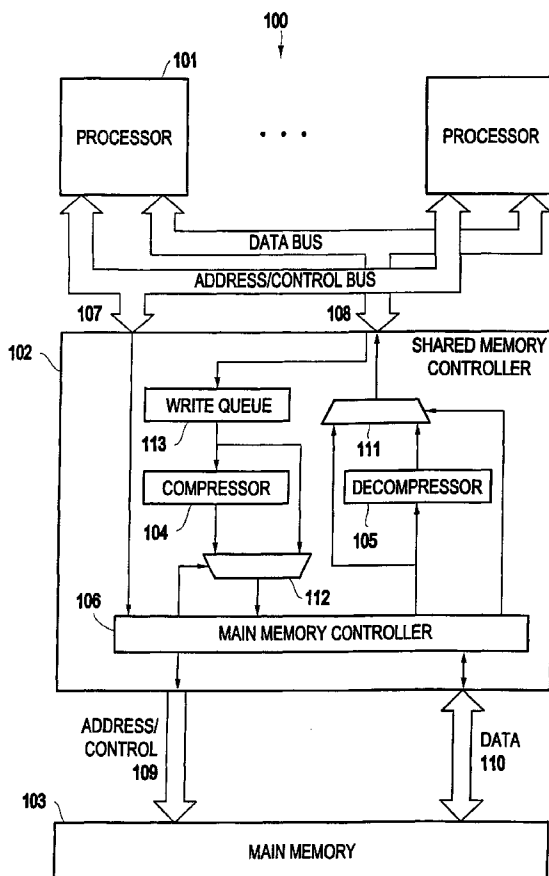
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(54) Title: SYSTEM AND METHOD FOR USING A COMPRESSED MAIN MEMORY BASED ON DEGREE OF COMPRESSIBILITY



(57) Abstract: A method and structure for reducing access latency and contention in a processing system (Figure 1, element 100) is disclosed. The invention detects when the amount of available memory is outside a prescribed range, and responsively selects data blocks for compression (to add to the available memory,) or decompression (to use surplus available memory for uncompressed data,) until the amount of available memory is within the prescribed range. When data blocks are compressed, the degree of compressibility attribute, DOC (Figure 3, element 303) is determined and stored as an attribute in the directory entry (Figure 3, element 300) associated with the data block. A most recently used list of recent data block addresses prevents those, as well those data blocks with poor DOC attributes, from being selected for recompression. All zero data blocks are detected to avoid standard compression/decompression overhead.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.