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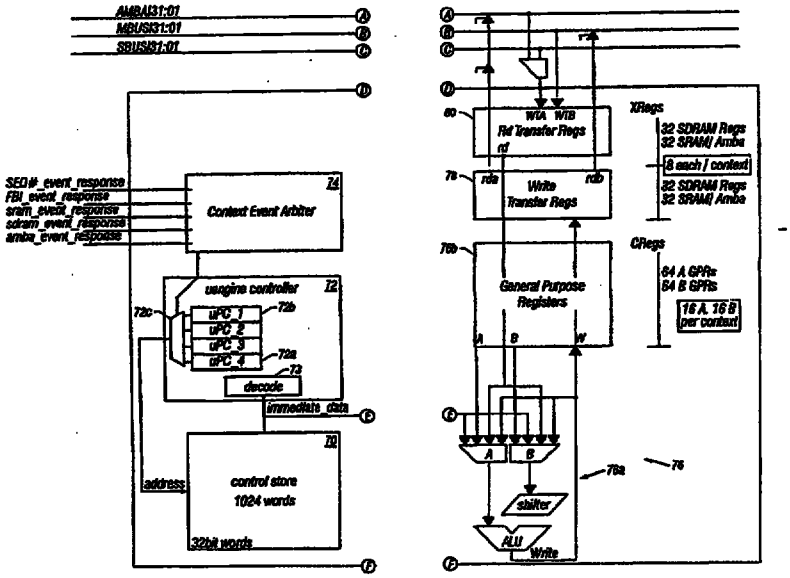
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(54) Title: EXECUTION OF MULTIPLE THREADS IN A PARALLEL PROCESSOR



(57) Abstract: A parallel hardware-based multithreaded processor is described. The processor includes a general purpose processor that coordinates system functions and a plurality of microengines that support multiple hardware threads. The processor also includes a memory control system that has a first memory controller that sorts memory references based on whether the memory references are directed to an even bank or an odd bank of memory and a second memory controller that optimizes memory references based upon whether the memory references are read references or write references.

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