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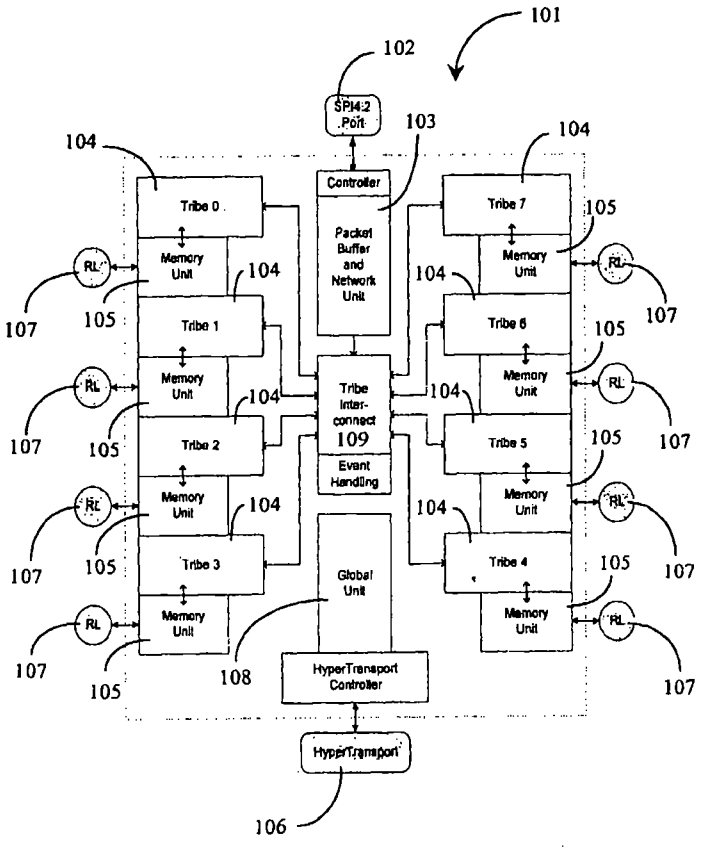
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[Continued on next page]

(54) Title: MULTI-THREADED PACKET PROCESSING ENGINE FOR STATEFUL PACKET PROCESSING



(57) Abstract: A processing engine (101) to accomplish a multiplicity of tasks has a multiplicity of processing tribes (104), each tribe comprising a multiplicity of context register sets and a multiplicity of processing resources for concurrent processing of a multiplicity of threads to accomplish the tasks, a memory structure having a multiplicity of memory blocks, each block storing data for processing threads, and an interconnect structure (109) and control system enabling tribe-to-tribe migration of contexts to move threads from 10 tribe-to-tribe. The processing engine is characterized in that individual ones of the tribes have preferential access to individual ones of the multiplicity of memory blocks.

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