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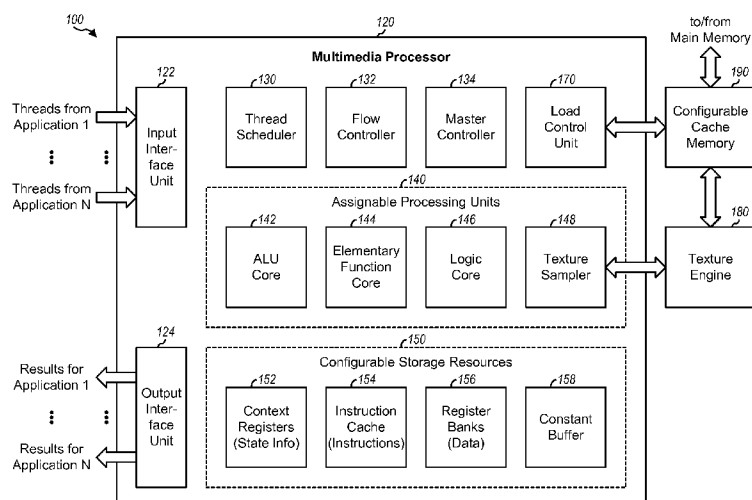
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[Continued on next page]

(54) Title: ON-DEMAND MULTI-THREAD MULTIMEDIA PROCESSOR



(57) Abstract: A device includes a multimedia processor that can concurrently support multiple applications for various types of multimedia such as graphics, audio, video, camera, games, etc. The multimedia processor includes configurable storage resources to store instructions, data, and state information for the applications and assignable processing units to perform various types of processing for the applications. The configurable storage resources may include an instruction cache to store instructions for the applications, register banks to store data for the applications, context registers to store state information for threads of the applications, etc. The processing units may include an arithmetic logic unit (ALU) core, an elementary function core, a logic core, a texture sampler, a load control unit, a flow controller, etc. The multimedia processor allocates a configurable portion of the storage resources to each application and dynamically assigns the processing units to the applications as requested by these applications.

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