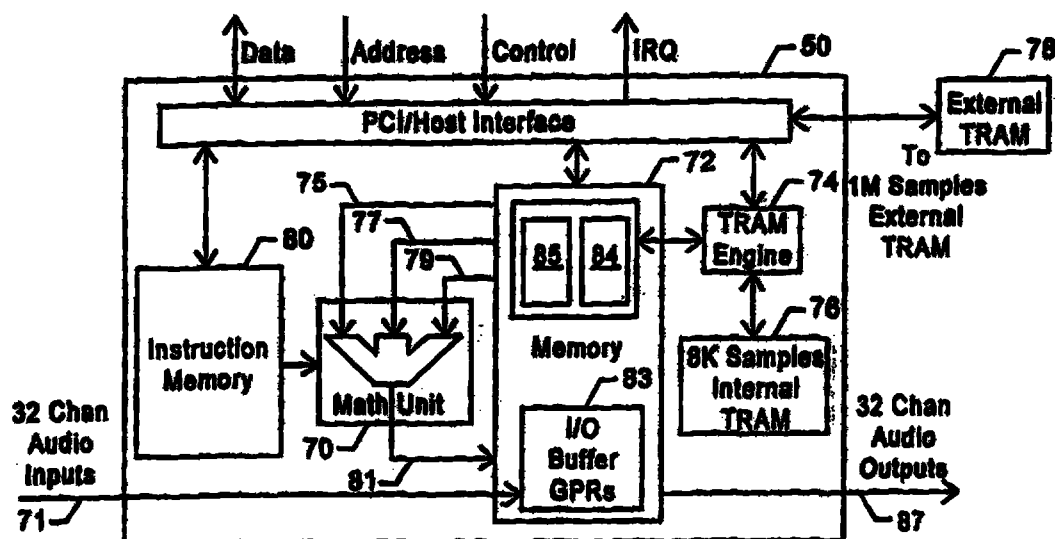




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(54) Title: **AUDIO EFFECTS PROCESSOR HAVING DECOUPLED INSTRUCTION EXECUTION AND AUDIO DATA SEQUENCING**



(57) Abstract

A sound effects processor (30) including a first memory (72), an instruction execution unit (70) and a sound memory engine (74) integrated onto a single chip. The first memory (72) includes a first address space that is addressable by both the instruction execution unit (70) and the sound effects engine (50). The instruction execution unit (70) executes sound processing instructions, including instructions to read from and write to said first address space and the sound memory engine (74) operates independent of the instruction execution unit (70) to read and write to the first address space and perform address arithmetic and memory accesses to a second memory as necessary to implement audio delay lines.