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(54) Title: **SOUND-PRODUCING INTEGRATED CIRCUIT WITH VIRTUAL CACHE**

(57) Abstract

A digital sound-producing device having a digital signal processor (12) and data cache memory (16), and using an external sample memory (18) for storing digital audio sample data, includes a virtual cache memory block (14) for dynamically allocating cache lines of the data cache memory. The virtual cache memory block is located in the address path between the digital signal processor and sample memory. Requests by the digital signal processor for access to the sample memory are in the form of a virtual address corresponding to a particular sample memory address.

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