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ABSTRACT

Data Storage Apparatus and Method for Managing Buffer Memory

A data storage apparatus has a sector buffer (10) for caching an access request that is provided in a DRAM (111) of the data storage apparatus. The sector buffer (10) has a first ring buffer (BUF_W) (12) that temporarily holds an external write request, and a second ring buffer (BUF_R) (11) that retains data read from the recording medium according to an external read request. A BPAGE (13) of the BUF_R (11) or BUF_W (12) is shifted according to external access patterns to thereby change the buffer sizes of the BUF_R (11) and BUF_W (12). Performance of the system is thus maintained when external access patterns favour external read requests or external write requests.

Fig 2.