A Caching Mechanism for FAT File System in Low-performance Embedded System

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***(Pt9)Abstract*— FAT file system is one of the most common file systems on various targets and operating systems. However, it has a performance issue on sequential writing to low-bandwidth storage due to reading FAT area and directory entries. In this paper, we design and implement an efficient FAT caching mechanism for sequential writing to low-bandwidth. The mechanism consists two parts: metadata cache and whole FAT read-ahead cache. As a result, we show 20x improvement for sequential writing to low bandwidth storage with our caching mechanism.**

***(Pt9)Keyword*—** file system, FAT, cache, embedded system, operating system

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