

Ash FS: A Flash Drive File System

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Abstract—The recent increase in USB Flash Drive capacities has triggered a need for a special file system that can handle large files such as the ones encountered in a NTFS environment, while keeping a good error correction and access speed.

In Ash FS, we are trying to reduce the wear levelling of the flash drive by storing such large quantity of data in an uniform way and provide the possibility of using compression, crypting and error correction techniques.

Index Terms—flash, NAND, file system, compression, crypting, error correction

REFERENCES

- [1] David Woodhouse, *JFFS: The Journaling Flash File System*, Ottawa Linux Symposium, 2001
- [2] Han-Joon Kim, Sang-Goo Lee, *A new flash memory management for flash storage system*, COMPSAC '99
- [3] Charles Manning, *YAFFS: the NAND-specific flash file system*, Linuxdevices.org, September 20th 2002
- [4] Eran Gal, Sivan Toledo, *A Transactional Flash File System for Micro-controllers*, USENIX '05
- [5] Seung-Ho Lim, Kyu-Ho Park, *An efficient NAND flash file system for flash memory storage*, IEEE Transaction on Computers, 55th Vol., July 2006