Linear File Store File Manager (LFS/LFM)

- Intel-developed code stores files and data contiguously using linked-list
- Well suited for eXecute-In-Place (XIP) applications
- LFS is a PCMCIA defined card partion structure
- Can work as the file manager or with an existing one
- Integrated flash media manager
- Designed for low update frequency applications
- Flash partion based architecture:
  - Uses a spare block per partition
  - Clean-up occurs on the entire partion
- Small code size (≈14K of code)
- Has “high-performance” edit capability
- Robust power-off recovery and media clean-up

LFM is the ‘C’ source code for Intel LFM (Linear file system [LFS] File Manager), a reference code version of Intel’s file manager and flash media manager based on LFS. LFS is a PCMCIA-defined partition format that is well suited for simple flash media managers (such as LFM) and execute-in-place (XIP) operation. The LFM reference code allows you to implement a simple, custom flash media manager/file system in your application without having to expend the effort to develop all of the flash file system code. It handles general flash file manager functions including but not limited to: File Open, File Close, File Delete, File Seek, Reclaim, and Power-off Recovery. You need only code the low level hardware specific interface and the high level interface to your code and/or your operating system. The card implementation of LFM was developed and tested on a PC/AT-compatible DOS-based system and includes a proof-of-concept LFM DOS executable, LFSCARD.EXE which exercises the LFM functions on an Intel Series 2 Flash card in an 82365SL PCIC- or equivalent-based PCMCIA slot. A companion to LFSCARD is also contained within the LFM source archive file: the executable and source code for Intel’s iCARDRV1. iCARDRV1 is a monolithic driver/enabler for Intel Flash cards which includes socket controller initialization for 82365SL PCIC or equivalent, socket control, and flash read, write, copy, and erase routines. For development and for the proof-of-concept executable, ICARDRV1 may also be used to run LFM (as LFSCARD.EXE) on a PC/AT desktop or notebook with a 82365SL PCIC-or compatible socket controller-based PCMCIA slot on an Intel Flash memory card.

The resident flash array (RFA) implementation of LFM was developed and tested on an i486SL™ Evaluation Board platform with an RFA board. All accesses to the RFA are done through protected mode with the RFA mapped into extended memory.

INTEL FLASH MEMORY SUPPORTED:
28F008SA, 28F008SC, 28F016SA, 28F016SC, 28F016SV, 28F016XD, 28F016XS, 28F032SA, Series 2 Cards, Series 2+ Cards, Value Series 100 Cards, Series 100 Miniature Cards

AVAILABILITY:
Now

CONTACT:
See Appendix C