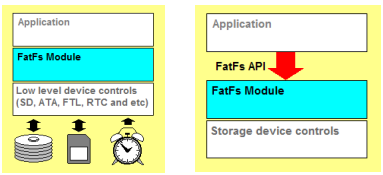
2023年1月7日 17:54



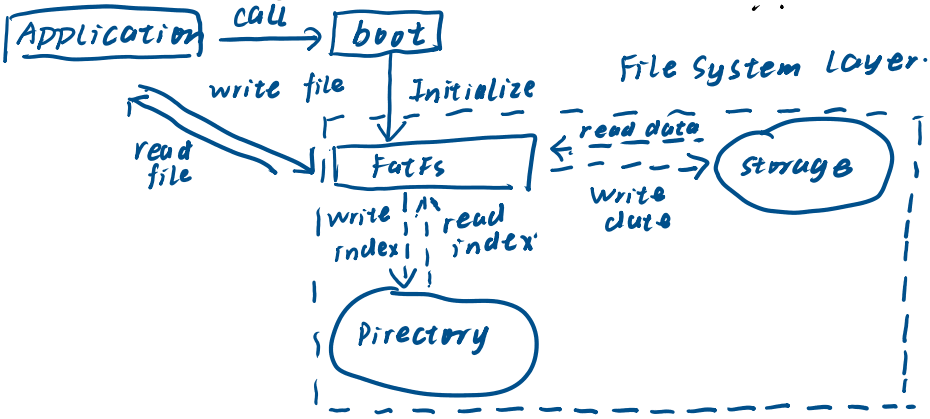
Original IO method:

MASTER send command ⟺ read / write SD cards.

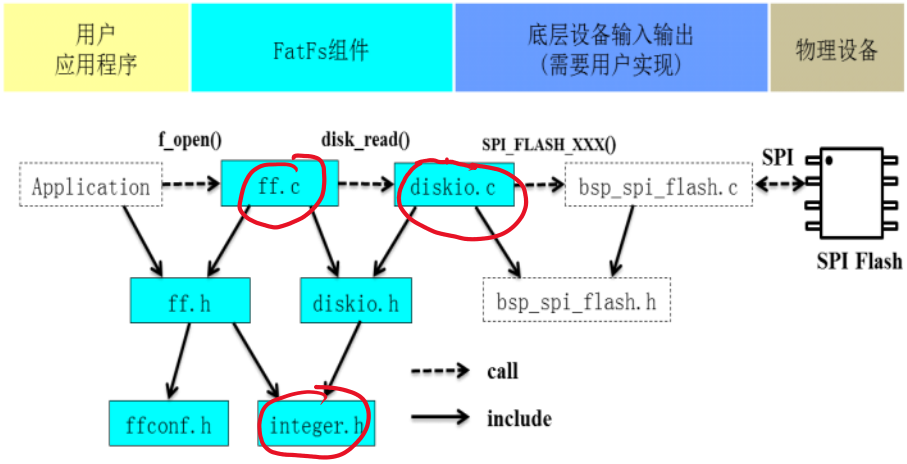
New IO method:

MASTER write file / read file → FatFs layer
send command
write data / read data
SD cards.

- File system : A management of data storage.
  - File System boot → Initialize the whole file system.
  - Directory : Store the indexes of files (Address、Info)
  - File storage : Spuce that stores data



- FatFs System layer:



※: diskio.c => We need to add SPI Physical layer in the file. } => Important.

※: integer.h : Some type definition

✿ : integer.h : Some type definition

✿ : ff.c : fatFs Core methods :

- File management
- IO methods

✿ : ff conf.h : fatFs Configuration

- Set Simplified Chinese
- ...

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- What we need to do?

- Storage Device Controls
  - disk_status - Get device status
  - disk_initialize - Initialize device
  - disk_read - Read data
  - disk_write - Write data
  - disk_ioctl - Control device dependent functions

Define these fiv function in diskio.c

函数	条件(ffconf.h)	备注
disk_status disk_initialize disk_read	✿ 总是需要 Important	
disk_write get_fattime disk_ioctl (CTRL_SYNC)	_FS_READONLY == 0	底层设备驱动函数
disk_ioctl (GET_SECTOR_COUNT) disk_ioctl (GET_BLOCK_SIZE)	_USE_MKFS == 1	Not so important.
disk_ioctl (GET_SECTOR_SIZE)	_MAX_SS != _MIN_SS	
disk_ioctl (CTRL_TRIM)	_USE_TRIM == 1	
ff_convert ff_wtoupper	_USE_LFN != 0	Unicode 支持，为支持简体中文，添加cc936.c到工程即可
ff_cre_syncobj ff_del_syncobj ff_req_grant ff_rel_grant	_FS_REENTRANT == 1	FatFs 可重入配置，需要多任务系统支持(一般不需要)
ff_mem_alloc ff_mem_free	_USE_LFN == 3	长文件名支持，缓冲区设置在堆空间(一般设置_USE_LFN = 2)

- Application workflow: