

PFS(3) Filesystem

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Propeller File System (version 3), or PFS(3), provides a simple way to store files on any storage media. It is the native filesystem for uOS.

PFS(3) divides each drive into 4KB sectors. Sector 0 is referred to as the Master Sector. It contains the following data:

- 16 bytes drive name
- 1 long magic number (always \$55AAFF66)
- 1 long number of sectors
- 1 long pointer to occupation map
- 1 unused long
- 1016 longs for boot code

Sector 1 contains the root directory. Each sector of a directory contains 1 long pointer to the parent directory, 1 long pointer to the next sector of the directory (1 if this is the last sector), and 73 14-long records of the form:

- 12 bytes name (0-terminated)
- 4 bytes extension (0-terminated)
- 1 long pointer to first sector
- 1 long file length (in bytes)
- 1 long flags
- 2 longs data/time modified (currently unused)
- 1 long user (unused)
- * 4 unused longs *

The flag bits are:

- bit 0: Does file exist? (If 0, ignore entry.)
- bit 1: Is it a file? (If 0, it's a directory.)
- bit 2: Write-protected? (currently unused)

The occupation map consists of a number of longs, one for each sector. Each long indicates the state of the sector:

If 0, the sector is empty.

If 1, the sector is the last sector of a file.

If anything else, the sector is part of a file, and this entry points to the next sector.