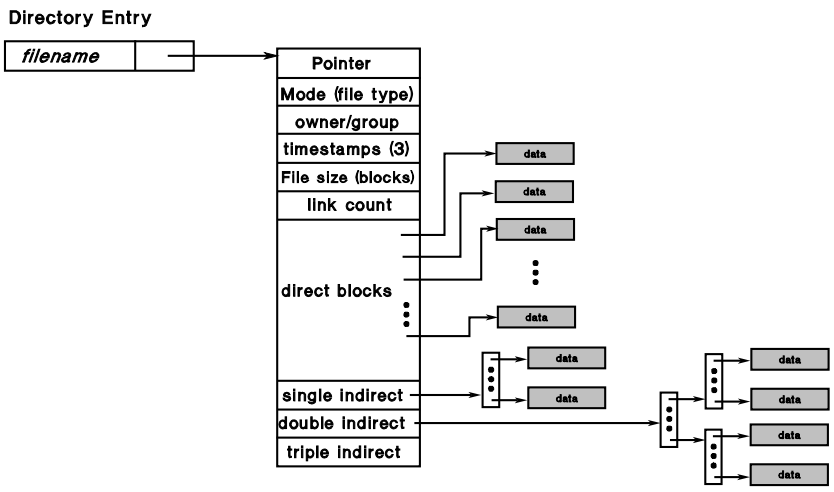
Disk Allocation Methods

- Contiguous
  - Simple and efficient, but
  - Not very flexible, but
  - Other formats strive for it
- Linked List
  - Great for sequential access, but
  - Not so good for random access.
  - File Allocation Table (FAT) – links in separate table
- Indexed
  - Good for both random and sequential access, but
  - Large files require lots of indices.
  - Unix uses indirect blocks

SLIDE001

University of Idaho

UNIX i-node

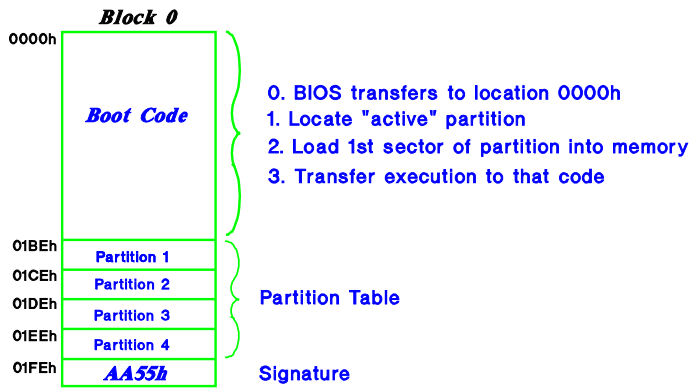


INTRO070

University of Idaho

Master Boot Record

Block zero on the disk



DISK0010

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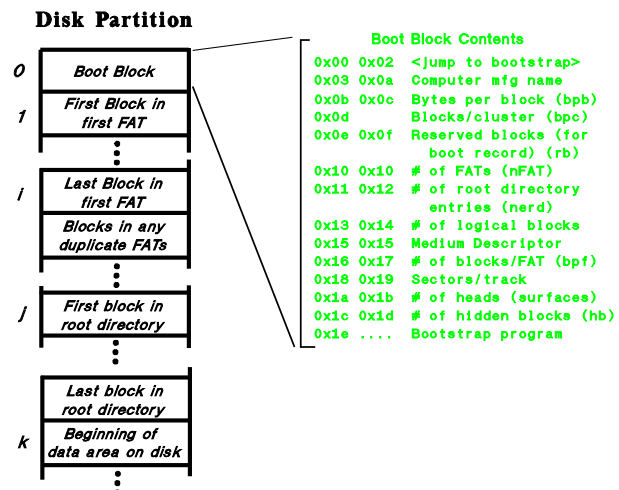
DOS Partition



DISK0020

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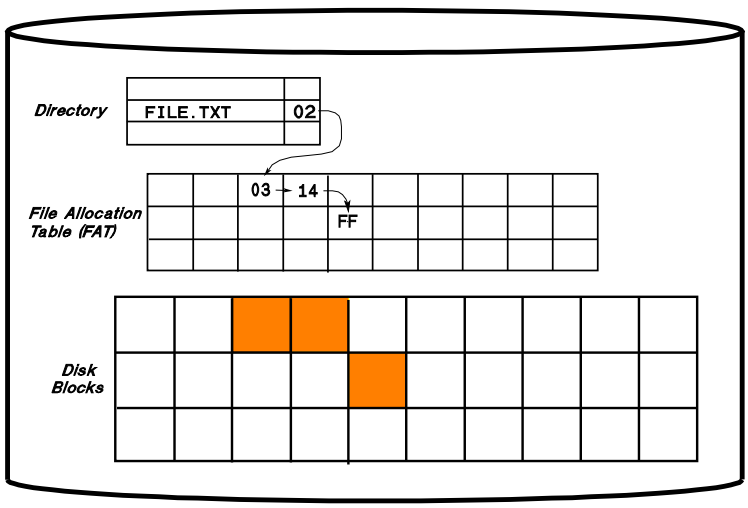
FAT File Example



FATDISK00

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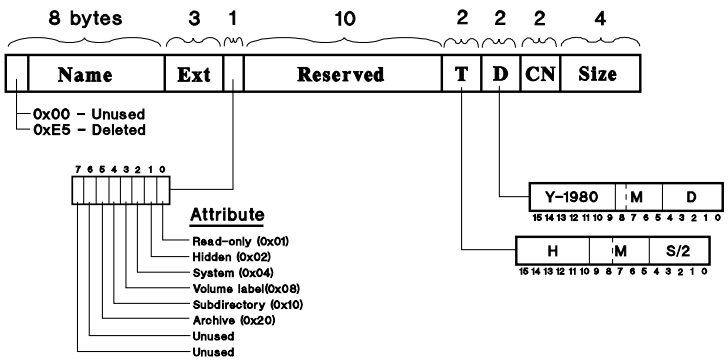
DOS Directory Entry



8 entries per block

DISK0030

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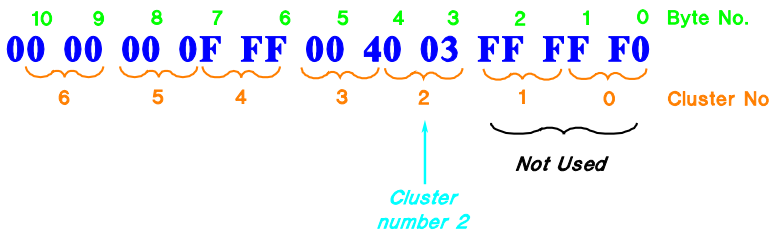
12 Bit FAT Example

The following is the FAT table for a 1200 byte file, 1 block/cluster, 512 bytes/block, starting at cluster number 2. DOS values are stored "little endian."



DISK0050

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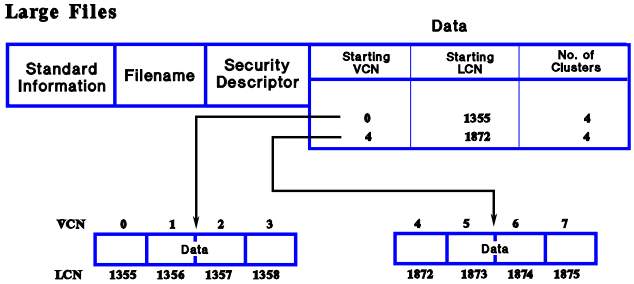
NTFS "Regular" Files

Small Files

Large Files



NTFS0030

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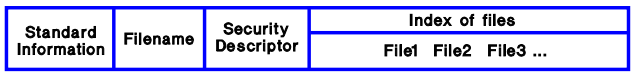
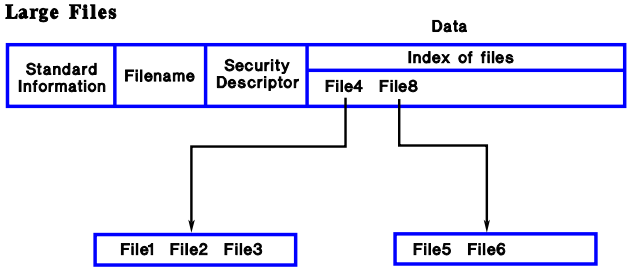
NTFS Directory Files

Small Files



Large Files



NTFS0040