Master Boot Record

Block zero on the disk

Boot Code

0. BIOS transfers to location 0000h
1. Locate "active" partition
2. Load 1st sector of partition into memory
3. Transfer execution to that code

Partition Table

Signature

DOS Partition

Disk Partition

Boot Block

00h: 00a <jump to bootstrap>
00b-00f Computer sig block
010h-014h Bytes per block (64k)
015h Blocks/sector (512)
016h-019h Reserved blocks (for boot record) (16)
01a-01f $ of FATs (4FAT)
020h-021h $ of root directory entries (long)
022h-023h $ of logical blocks
024h-025h Master descriptor
026h-027h $ of blocks/FAT (256)
028h $ of master track
029h-02ae $ of heads (maximum)
02af-02bf $ of hidden blocks (16)
02cf- $ of bootstrap program

First block in root directory

Last block in root directory

Restoring of data area on disk
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."

```
00 00 00 0F FF 00 40 03 FF FF FF
```

```
Cluster number 2
```

NTFS "Regular" Files

Small Files

<table>
<thead>
<tr>
<th>Standard Information</th>
<th>Filename</th>
<th>Security Descriptor</th>
<th>Data</th>
</tr>
</thead>
</table>

Large Files

<table>
<thead>
<tr>
<th>Standard Information</th>
<th>Filename</th>
<th>Security Descriptor</th>
<th>Secs VCN</th>
<th>Secs LCN</th>
<th>Secs Ext</th>
<th>No. of Chunks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

```
```