

Cabeçalho do ficheiro BMP (1/4)

Offset	Field	Size	Contents
0000h	Identifier	2 bytes	The characters identifying the bitmap. The following entries are possible: 'BM' - Windows 3.1x, 95, NT, ... 'BA' - OS/2 Bitmap Array 'CI' - OS/2 Color Icon 'CP' - OS/2 Color Pointer 'IC' - OS/2 Icon 'PT' - OS/2 Pointer
0002h	File Size	1 dword	Complete file size in bytes.
0006h	Reserved	1 dword	Reserved for later use.
000Ah	Bitmap Data Offset	1 dword	Offset from beginning of file to the beginning of the bitmap data.

Cabeçalho do ficheiro BMP (2/4)

Offset	Field	Size	Contents
000Eh	Bitmap Header Size	1 dword	Length of the Bitmap Info Header used to describe the bitmap colors, compression, ...The following sizes are possible: 28h - Windows 3.1x, 95, NT, ... 0Ch - OS/2 1.x F0h - OS/2 2.x
0012h	Width	1 dword	Horizontal width of bitmap in pixels.
0016h	Height	1 dword	Vertical height of bitmap in pixels.
001Ah	Planes	1 word	Number of planes in this bitmap.
001Ch	Bits Per Pixel	1 word	Bits per pixel used to store palette entry information. This also identifies in an indirect way the number of possible colors. Possible values are: 1 - Monochrome bitmap 4 - 16 color bitmap 8 - 256 color bitmap 16 - 16bit (high color) bitmap 24 - 24bit (true color) bitmap 32 - 32bit (true color) bitmap

Cabeçalho do ficheiro BMP (3/4)

Offset	Field	Size	Contents
001Eh	Compression	1 dword	Compression specifications. The following values are possible: 0 - none (Also identified by BI_RGB) 1 - RLE 8-bit / pixel (Also identified by BI_RLE4) 2 - RLE 4-bit / pixel (Also identified by BI_RLE8) 3 - Bitfields (Also identified by BI_BITFIELDS)
0022h	Bitmap Data Size	1 dword	Size of the bitmap data in bytes. This number must be rounded to the next 4 byte boundary.
0026h	HResolution	1 dword	Horizontal resolution expressed in pixel per meter.
002Ah	VResolution	1 dword	Vertical resolution expressed in pixels per meter.
002Eh	Colors	1 dword	Number of colors used by this bitmap. For a 8-bit / pixel bitmap this will be 100h or 256.
0032h	Important Colors	1 dword	Number of important colors. This number will be equal to the number of colors when every color is important.

Cabeçalho do ficheiro BMP (4/4)

Offset	Field	Size	Contents
0036h	Palette	N * 4 byte	The palette specification. For every entry in the palette four bytes are used to describe the RGB values of the color in the following way: 1 byte for blue component 1 byte for green component 1 byte for red component 1 byte filler which is set to 0 (zero)
0436h	Bitmap Data	x bytes	Depending on the compression specifications, this field contains all the bitmap data bytes which represent indices in the color palette.

Estrutura Fileheader

```
struct Fileheader
{
    unsigned short Type;           // signature - 'BM'
    unsigned long  Size;           // file size in bytes
    unsigned short Reserved1;     // 0
    unsigned short Reserved2;     // 0
    unsigned long  OffBits;       // offset to bitmap
    unsigned long  StructSize;    // size of this struct (40)
    unsigned long  Width;         // bmap width in pixels
    unsigned long  Height;        // bmap height in pixels
    unsigned short Planes;        // num planes - always 1
    unsigned short BitCount;      // bits per pixel
    unsigned long  Compression;   // compression flag
    unsigned long  SizeImage;     // image size in bytes
    long           XPelsPerMeter; // horz resolution
    long           YPelsPerMeter; // vert resolution
    unsigned long  ClrUsed;       // 0 -> color table size
    unsigned long  ClrImportant;  // important color count
    Fileheader()
    {Size=Width=Height=Planes=BitCount=Compression=SizeImage=XPelsPerMeter=
    YPelsPerMeter=ClrUsed=ClrImportant=Type=StructSize=Reserved1=Reserved2=
    OffBits=0;
    }
}EIC
```

Estrutura RGBQUAD

```
struct RGBQUAD
{ unsigned char rgbBlue;
  unsigned char rgbGreen;
  unsigned char rgbRed;
  unsigned char rgbReserved;
  RGBQUAD( )
  {rgbBlue = rgbGreen = rgbRed = 0;
   rgbReserved = 0;
  }
};
```

Estrutura do cabeçalho BMP

Name		Size	Description
Header		14 bytes	Windows Structure: BITMAPFILEHEADER
	Signature	2 bytes	'BM'
	FileSize	4 bytes	File size in bytes
	...		
InfoHeader		40 bytes	Windows Structure: BITMAPINFOHEADER
	Size	4 bytes	Size of InfoHeader =40
	...		
ColorTable		4 * NumColors bytes	present only if Info.BitsPerPixel <= 8 colors should be ordered by importance
	Red	1 byte	Red intensity
	Green	1 byte	Green intensity
	Blue	1 byte	Blue intensity
	reserved	1 byte	unused (=0)
	repeated NumColors times		
Raster Data		Info.ImageSize bytes	The pixel data

Exemplo de ficheiro BMP

MiniDumper v1.02 - (C) 2004-05 By Marco Pontello

File name: D:\doc\disc\sm\lenag.bmp

File size: 65KB

```
0000: 42 4D 36 04 01 00 00 00 00 00 36 04 00 00 28 00  BM6.....6...(.
0010: 00 00 00 01 00 00 00 01 00 00 01 00 08 00 00 00  .....
0020: 00 00 00 00 01 00 33 2E 00 00 33 2E 00 00 00 01  .....3...3.....
0030: 00 00 00 01 00 00 00 00 00 00 01 01 01 00 02 02  .....
0040: 02 00 03 03 03 00 04 04 04 00 05 05 05 00 06 06  .....
0050: 06 00 07 07 07 00 08 08 08 00 09 09 09 00 0A 0A  .....
0060: 0A 00 0B 0B 0B 00 0C 0C 0C 00 0D 0D 0D 00 0E 0E  .....
0070: 0E 00 0F 0F 0F 00 10 10 10 00 11 11 11 00 12 12  .....
0080: 12 00 13 13 13 00 14 14 14 00 15 15 15 00 16 16  .....
0090: 16 00 17 17 17 00 18 18 18 00 19 19 19 00 1A 1A  .....
00A0: 1A 00 1B 1B 1B 00 1C 1C 1C 00 1D 1D 1D 00 1E 1E  .....
00B0: 1E 00 1F 1F 1F 00 20 20 20 00 21 21 21 00 22 22  ..... .!!!."
00C0: 22 00 23 23 23 00 24 24 24 00 25 25 25 00 26 26  ".###.$$$.%%%.&&
00D0: 26 00 27 27 27 00 28 28 28 00 29 29 29 00 2A 2A  &.''.(((.))).**
00E0: 2A 00 2B 2B 2B 00 2C 2C 2C 00 2D 2D 2D 00 2E 2E  *.+++.,,.,---...
00F0: 2E 00 2F 2F 2F 00 30 30 30 00 31 31 31 00 32 32  ..///.000.111.22
```