

**NAME**

**pbm** - portable bitmap file format

**DESCRIPTION**

The portable bitmap format is a lowest common denominator monochrome file format. It was originally designed to make it reasonable to mail bitmaps between different types of machines using the typical stupid network mailers we have today. Now it serves as the common language of a large family of bitmap conversion filters. The definition is as follows:

- ⊕ A "magic number" for identifying the file type. A pbm file's magic number is the two characters "P1".
- ⊕ Whitespace (blanks, TABs, CRs, LFs).
- ⊕ A width, formatted as ASCII characters in decimal.
- ⊕ Whitespace.
- ⊕ A height, again in ASCII decimal.
- ⊕ Whitespace.
- ⊕ Width \* height bits, each either '1' or '0', starting at the top-left corner of the bitmap, proceeding in normal English reading order.
- ⊕ The character '1' means black, '0' means white.
- ⊕ Whitespace in the bits section is ignored.
- ⊕ Characters from a "#" to the next end-of-line are ignored (comments).
- ⊕ No line should be longer than 70 characters.

Here is an example of a small bitmap in this format:

```
P1
# feep.pbm
24 7
00000000000000000000000000000000
011110011110011110011110
010000010000010000010010
011100011100011100011110
010000010000010000010000
010000011110011110010000
00000000000000000000000000000000
```

Programs that read this format should be as lenient as possible, accepting anything that looks remotely like a bitmap.

There is also a variant on the format, available by setting the RAWBITS option at compile time. This

variant is different in the following ways:

- The "magic number" is "P4" instead of "P1".
- The bits are stored eight per byte, high bit first low bit last.
- No whitespace is allowed in the bits section, and only a single character of whitespace (typically a newline) is allowed after the height.
- The files are eight times smaller and many times faster to read and write.

## **AUTHORS**

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