

# Photoshop Image Resources

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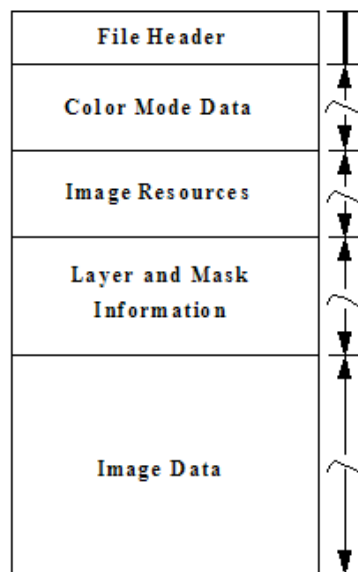
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# Photoshop Image Resources

This document describes how to access Photoshop Image Resources.

## Photoshop File Format

The Photoshop file format is divided into five major sections, as shown in the diagram below. The Photoshop file format has many length markers. Use these length markers to move from one section to the next. The length markers are usually padded with bytes to round to the nearest 2 or 4-byte interval.



**Figure 1 - Photoshop File Structure**

The file header has a fixed length; the other four sections are variable in length.

When writing one of these sections, you should write all fields in the section, as Photoshop may try to read the entire section. Whenever writing a file and skipping bytes, you should explicitly write zeros for the skipped fields.

When reading one of the length-delimited sections, use the length field to decide when you should stop reading. In most cases, the length field indicates the number of bytes, not records, following.

The values in "Length" column in all tables are in bytes.

All values defined as Unicode strings consist of: A 4-byte length field, representing the number of characters in the string (not bytes). The string of Unicode values, two bytes per character.

### File Header Section

The file header contains the basic properties of the image. The length of this section is exactly 26-bytes.

### Color Mode Data Section

The color mode data section is structured as follows:

Length	Description
4	The length of the following color data.
Variable	The color data.

### Image Resources Section

The third section of the file contains image resources. It starts with a length field, followed by a series of resource blocks.

Length	Description
4	Length of image resource section. The length may be zero.
Variable	Image resources (see "Image Resource Blocks").

### Image Resource Blocks

Image resource blocks are the basic building unit of several file formats, including Photoshop's native file format, JPEG, and TIFF.

Image resources are used to store non-pixel data associated with images, such as pen tool paths. They are referred to as resource blocks because they hold data that was stored in the Macintosh's resource fork in early versions of Photoshop.

The basic structure of image resource blocks is shown in See "Image resource block" below. The last field is the data area, which varies by resource type. The makeup of each resource type is described in the following sections.

### Image Resource Block

Length	Description
4	Signature: ' <i>8BIM</i> '
2	Unique identifier for the resource. See Image resource IDs contains a list of resource IDs used by Photoshop.
Variable	Name: Pascal string, padded to make the size even (a null name consists of two bytes of 0)
4	Actual size of resource data that follows
Variable	The resource data, described in the sections on the individual resource types. It is padded to make the size even.

## Appendix: Platform Notes

### Windows

All data is stored in big endian byte order. On the Windows platform, you must byte swap short and long integers when reading or writing.

### Mac OS

For cross-platform compatibility, all information needed by Photoshop is stored in the data fork. For interoperability with other Macintosh applications, however, some information is duplicated in resources stored in the resource fork of the file:

For compatibility with image cataloging applications, the *'pnot'* resource id 0 contains references to thumbnail, keywords, and caption information stored in other resources.

The thumbnail picture is stored in a *'PICT'* resource, the keywords are stored in *'STR#'* resource 128 and the caption text is stored in *'TEXT'* resource 128. For more information on the format of these resources see *Inside Macintosh: QuickTime Components* and the *Extensis Fetch Awareness Developer's Toolkit*.