

libpng version 1.4.3 - June 26, 2010

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See also "Contributing Authors", below.

Note about libpng version numbers:

Due to various miscommunications, unforeseen code incompatibilities and occasional factors outside the authors' control, version numbering on the library has not always been consistent and straightforward.

The following table summarizes matters since version 0.89c, which was the first widely used release:

| source version      | png.h string       | png.h int | shared-lib version |                                      |
|---------------------|--------------------|-----------|--------------------|--------------------------------------|
| 0.89c               | "1.0 beta 3"       | 0.89      | 89                 | 1.0.89                               |
| 0.90                | "1.0 beta 4"       | 0.90      | 90                 | 0.90 [should have been 2.0.90]       |
| 0.95                | "1.0 beta 5"       | 0.95      | 95                 | 0.95 [should have been 2.0.95]       |
| 0.96                | "1.0 beta 6"       | 0.96      | 96                 | 0.96 [should have been 2.0.96]       |
| 0.97b               | "1.00.97 beta 7"   | 1.00.97   | 97                 | 1.0.1 [should have been 2.0.97]      |
| 0.97c               |                    | 0.97      | 97                 | 2.0.97                               |
| 0.98                |                    | 0.98      | 98                 | 2.0.98                               |
| 0.99                |                    | 0.99      | 98                 | 2.0.99                               |
| 0.99a-m             |                    | 0.99      | 99                 | 2.0.99                               |
| 1.00                |                    | 1.00      | 100                | 2.1.0 [100 should be 10000]          |
| 1.0.0               | (from here on, the |           | 100                | 2.1.0 [100 should be 10000]          |
| 1.0.1               | png.h string is    | 10001     |                    | 2.1.0                                |
| 1.0.1a-e            | identical to the   | 10002     |                    | from here on, the shared library     |
| 1.0.2               | source version)    | 10002     |                    | is 2.V where V is the source code    |
| 1.0.2a-b            |                    | 10003     |                    | version, except as noted.            |
| 1.0.3               |                    | 10003     |                    |                                      |
| 1.0.3a-d            |                    | 10004     |                    |                                      |
| 1.0.4               |                    | 10004     |                    |                                      |
| 1.0.4a-f            |                    | 10005     |                    |                                      |
| 1.0.5 (+ 2 patches) |                    | 10005     |                    |                                      |
| 1.0.5a-d            |                    | 10006     |                    |                                      |
| 1.0.5e-r            |                    | 10100     |                    | (not source compatible)              |
| 1.0.5s-v            |                    | 10006     |                    | (not binary compatible)              |
| 1.0.6 (+ 3 patches) |                    | 10006     |                    | (still binary incompatible)          |
| 1.0.6d-f            |                    | 10007     |                    | (still binary incompatible)          |
| 1.0.6g              |                    | 10007     |                    |                                      |
| 1.0.6h              |                    | 10007     |                    | 10.6h (testing xy.z so-numbering)    |
| 1.0.6i              |                    | 10007     |                    | 10.6i                                |
| 1.0.6j              |                    | 10007     |                    | 2.1.0.6j (incompatible with 1.0.0)   |
| 1.0.7beta11-14      | DLLNUM             | 10007     |                    | 2.1.0.7beta11-14 (binary compatible) |

|                |    |       |                                      |
|----------------|----|-------|--------------------------------------|
| 1.0.7beta15-18 | 1  | 10007 | 2.1.0.7beta15-18 (binary compatible) |
| 1.0.7rc1-2     | 1  | 10007 | 2.1.0.7rc1-2 (binary compatible)     |
| 1.0.7          | 1  | 10007 | (still compatible)                   |
| 1.0.8beta1-4   | 1  | 10008 | 2.1.0.8beta1-4                       |
| 1.0.8rc1       | 1  | 10008 | 2.1.0.8rc1                           |
| 1.0.8          | 1  | 10008 | 2.1.0.8                              |
| 1.0.9beta1-6   | 1  | 10009 | 2.1.0.9beta1-6                       |
| 1.0.9rc1       | 1  | 10009 | 2.1.0.9rc1                           |
| 1.0.9beta7-10  | 1  | 10009 | 2.1.0.9beta7-10                      |
| 1.0.9rc2       | 1  | 10009 | 2.1.0.9rc2                           |
| 1.0.9          | 1  | 10009 | 2.1.0.9                              |
| 1.0.10beta1    | 1  | 10010 | 2.1.0.10beta1                        |
| 1.0.10rc1      | 1  | 10010 | 2.1.0.10rc1                          |
| 1.0.10         | 1  | 10010 | 2.1.0.10                             |
| 1.0.11beta1-3  | 1  | 10011 | 2.1.0.11beta1-3                      |
| 1.0.11rc1      | 1  | 10011 | 2.1.0.11rc1                          |
| 1.0.11         | 1  | 10011 | 2.1.0.11                             |
| 1.0.12beta1-2  | 2  | 10012 | 2.1.0.12beta1-2                      |
| 1.0.12rc1      | 2  | 10012 | 2.1.0.12rc1                          |
| 1.0.12         | 2  | 10012 | 2.1.0.12                             |
| 1.1.0a-f       | -  | 10100 | 2.1.1.0a-f (branch abandoned)        |
| 1.2.0beta1-2   | 2  | 10200 | 2.1.2.0beta1-2                       |
| 1.2.0beta3-5   | 3  | 10200 | 3.1.2.0beta3-5                       |
| 1.2.0rc1       | 3  | 10200 | 3.1.2.0rc1                           |
| 1.2.0          | 3  | 10200 | 3.1.2.0                              |
| 1.2.1beta1-4   | 3  | 10201 | 3.1.2.1beta1-4                       |
| 1.2.1rc1-2     | 3  | 10201 | 3.1.2.1rc1-2                         |
| 1.2.1          | 3  | 10201 | 3.1.2.1                              |
| 1.2.2beta1-6   | 12 | 10202 | 12.so.0.1.2.2beta1-6                 |
| 1.0.13beta1    | 10 | 10013 | 10.so.0.1.0.13beta1                  |
| 1.0.13rc1      | 10 | 10013 | 10.so.0.1.0.13rc1                    |
| 1.2.2rc1       | 12 | 10202 | 12.so.0.1.2.2rc1                     |
| 1.0.13         | 10 | 10013 | 10.so.0.1.0.13                       |
| 1.2.2          | 12 | 10202 | 12.so.0.1.2.2                        |
| 1.2.3rc1-6     | 12 | 10203 | 12.so.0.1.2.3rc1-6                   |
| 1.2.3          | 12 | 10203 | 12.so.0.1.2.3                        |
| 1.2.4beta1-3   | 13 | 10204 | 12.so.0.1.2.4beta1-3                 |
| 1.0.14rc1      | 13 | 10014 | 10.so.0.1.0.14rc1                    |
| 1.2.4rc1       | 13 | 10204 | 12.so.0.1.2.4rc1                     |
| 1.0.14         | 10 | 10014 | 10.so.0.1.0.14                       |
| 1.2.4          | 13 | 10204 | 12.so.0.1.2.4                        |
| 1.2.5beta1-2   | 13 | 10205 | 12.so.0.1.2.5beta1-2                 |
| 1.0.15rc1-3    | 10 | 10015 | 10.so.0.1.0.15rc1-3                  |
| 1.2.5rc1-3     | 13 | 10205 | 12.so.0.1.2.5rc1-3                   |
| 1.0.15         | 10 | 10015 | 10.so.0.1.0.15                       |
| 1.2.5          | 13 | 10205 | 12.so.0.1.2.5                        |
| 1.2.6beta1-4   | 13 | 10206 | 12.so.0.1.2.6beta1-4                 |
| 1.0.16         | 10 | 10016 | 10.so.0.1.0.16                       |
| 1.2.6          | 13 | 10206 | 12.so.0.1.2.6                        |
| 1.2.7beta1-2   | 13 | 10207 | 12.so.0.1.2.7beta1-2                 |
| 1.0.17rc1      | 10 | 10017 | 12.so.0.1.0.17rc1                    |
| 1.2.7rc1       | 13 | 10207 | 12.so.0.1.2.7rc1                     |
| 1.0.17         | 10 | 10017 | 12.so.0.1.0.17                       |
| 1.2.7          | 13 | 10207 | 12.so.0.1.2.7                        |

|                 |    |       |                      |
|-----------------|----|-------|----------------------|
| 1.2.8beta1-5    | 13 | 10208 | 12.so.0.1.2.8beta1-5 |
| 1.0.18rc1-5     | 10 | 10018 | 12.so.0.1.0.18rc1-5  |
| 1.2.8rc1-5      | 13 | 10208 | 12.so.0.1.2.8rc1-5   |
| 1.0.18          | 10 | 10018 | 12.so.0.1.0.18       |
| 1.2.8           | 13 | 10208 | 12.so.0.1.2.8        |
| 1.2.9beta1-3    | 13 | 10209 | 12.so.0.1.2.9beta1-3 |
| 1.2.9beta4-11   | 13 | 10209 | 12.so.0.9[.0]        |
| 1.2.9rc1        | 13 | 10209 | 12.so.0.9[.0]        |
| 1.2.9           | 13 | 10209 | 12.so.0.9[.0]        |
| 1.2.10beta1-7   | 13 | 10210 | 12.so.0.10[.0]       |
| 1.2.10rc1-2     | 13 | 10210 | 12.so.0.10[.0]       |
| 1.2.10          | 13 | 10210 | 12.so.0.10[.0]       |
| 1.4.0beta1-5    | 14 | 10400 | 14.so.0.0[.0]        |
| 1.2.11beta1-4   | 13 | 10211 | 12.so.0.11[.0]       |
| 1.4.0beta7-8    | 14 | 10400 | 14.so.0.0[.0]        |
| 1.2.11          | 13 | 10211 | 12.so.0.11[.0]       |
| 1.2.12          | 13 | 10212 | 12.so.0.12[.0]       |
| 1.4.0beta9-14   | 14 | 10400 | 14.so.0.0[.0]        |
| 1.2.13          | 13 | 10213 | 12.so.0.13[.0]       |
| 1.4.0beta15-36  | 14 | 10400 | 14.so.0.0[.0]        |
| 1.4.0beta37-87  | 14 | 10400 | 14.so.14.0[.0]       |
| 1.4.0rc01       | 14 | 10400 | 14.so.14.0[.0]       |
| 1.4.0beta88-109 | 14 | 10400 | 14.so.14.0[.0]       |
| 1.4.0rc02-08    | 14 | 10400 | 14.so.14.0[.0]       |
| 1.4.0           | 14 | 10400 | 14.so.14.0[.0]       |
| 1.4.1beta01-03  | 14 | 10401 | 14.so.14.1[.0]       |
| 1.4.1rc01       | 14 | 10401 | 14.so.14.1[.0]       |
| 1.4.1beta04-12  | 14 | 10401 | 14.so.14.1[.0]       |
| 1.4.1rc02-04    | 14 | 10401 | 14.so.14.1[.0]       |
| 1.4.1           | 14 | 10401 | 14.so.14.1[.0]       |
| 1.4.2beta01     | 14 | 10402 | 14.so.14.2[.0]       |
| 1.4.2rc02-06    | 14 | 10402 | 14.so.14.2[.0]       |
| 1.4.2           | 14 | 10402 | 14.so.14.2[.0]       |
| 1.4.3beta01-05  | 14 | 10403 | 14.so.14.3[.0]       |
| 1.4.3rc01-03    | 14 | 10403 | 14.so.14.3[.0]       |
| 1.4.3           | 14 | 10403 | 14.so.14.3[.0]       |

Henceforth the source version will match the shared-library major and minor numbers; the shared-library major version number will be used for changes in backward compatibility, as it is intended. The PNG\_LIBPNG\_VER macro, which is not used within libpng but is available for applications, is an unsigned integer of the form xyyzz corresponding to the source version x.y.z (leading zeros in y and z). Beta versions were given the previous public release number plus a letter, until version 1.0.6j; from then on they were given the upcoming public release number plus "betaNN" or "rcN".

Binary incompatibility exists only when applications make direct access to the info\_ptr or png\_ptr members through png.h, and the compiled application is loaded with a different version of the library.

DLLNUM will change each time there are forward or backward changes in binary compatibility (e.g., when a new feature is added).

See libpng.txt or libpng.3 for more information. The PNG specification is available as a W3C Recommendation and as an ISO Specification, <<http://www.w3.org/TR/2003/REC-PNG-20031110/>

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Cosmin Truta

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appreciated.

A "png\_get\_copyright" function is available, for convenient use in "about"  
boxes and the like:

```
printf("%s",png_get_copyright(NULL));
```

Also, the PNG logo (in PNG format, of course) is supplied in the  
files "pngbar.png" and "pngbar.jpg (88x31) and "pngnow.png" (98x31).

Libpng is OSI Certified Open Source Software. OSI Certified is a certification mark of the Open Source Initiative.

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Y2K compliance in libpng:

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June 26, 2010

Since the PNG Development group is an ad-hoc body, we can't make an official declaration.

This is your unofficial assurance that libpng from version 0.71 and upward through 1.4.3 are Y2K compliant. It is my belief that earlier versions were also Y2K compliant.

Libpng only has three year fields. One is a 2-byte unsigned integer that will hold years up to 65535. The other two hold the date in text format, and will hold years up to 9999.

The integer is

"png\_uint\_16 year" in png\_time\_struct.

The strings are

"png\_charp\_time\_buffer" in png\_struct and

"near\_time\_buffer", which is a local character string in png.c.

There are seven time-related functions:

png.c: png\_convert\_to\_rfc\_1123() in png.c

(formerly png\_convert\_to\_rfc\_1152() in error)

png\_convert\_from\_struct\_tm() in pngwrite.c, called in pngwrite.c

png\_convert\_from\_time\_t() in pngwrite.c

png\_get\_tIME() in pngget.c

png\_handle\_tIME() in pngutil.c, called in pngread.c

png\_set\_tIME() in pngset.c

png\_write\_tIME() in pngutil.c, called in pngwrite.c

All handle dates properly in a Y2K environment. The png\_convert\_from\_time\_t() function calls gmtime() to convert from system clock time, which returns (year - 1900), which we properly convert to the full 4-digit year. There is a possibility that applications using libpng are not passing 4-digit years into the png\_convert\_to\_rfc\_1123() function, or that they are incorrectly passing only a 2-digit year instead of "year - 1900" into the png\_convert\_from\_struct\_tm() function,

but this is not under our control. The libpng documentation has always stated that it works with 4-digit years, and the APIs have been documented as such.

The tIME chunk itself is also Y2K compliant. It uses a 2-byte unsigned integer to hold the year, and can hold years as large as 65535.

zlib, upon which libpng depends, is also Y2K compliant. It contains no date-related code.

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