What's New in HeaderDoc 8

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What's New in HeaderDoc 8

HeaderDoc 8 is the latest incarnation of the HeaderDoc tool. It consists of a series of perl scripts and several small C helper applications that allows conversion of documentation embedded in header files in many languages into HTML and other output formats.

HeaderDoc 8 is the first major feature release in a while. HeaderDoc 8 is nearly a ground-up rewrite of HeaderDoc. It incorporates all of the functionality of previous versions, but also provides a number of new features, such as declaration syntax coloring/highlighting and an easier-to-use comment syntax. These features are described in "Major Features" (page 8).

HeaderDoc 8 also adds a number of additional languages with various levels of support. These are described in "Languages Supported" (page 7).

Finally, HeaderDoc 8 adds a number of new (optional) tags for convenience. These are described in "New Tags" (page 9).

For additional information, see the documentation that is packaged with HeaderDoc.

Languages Supported

HeaderDoc 8 supports many more languages than HeaderDoc 7. This table shows the various languages and the level of support.

Table 1-1 HeaderDoc 8 Language Support

Language	HeaderDoc 7 support	HeaderDoc 8 support
C headers	yes	yes
C++	yes	yes
Objective C	yes	yes
C source code	no	yes
K&R C sources	no	yes

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Language	HeaderDoc 7 support	HeaderDoc 8 support
Java	no	yes *
JavaScript	no	yes *
Pascal	no	yes
PHP	sort-of	yes **
Perl	no	yes **
Shell Scripts	no	yes **
Mach IPC Interface Defs	no	yes **

Note:

* Java/JavaScript support functions and classes.

** Scripting languages only support functions/subroutines.

Major Features

HeaderDoc 8 has a number of new features.

- Function/data type groupings
- Declaration syntax coloring
- New tagless syntax

```
/*! This is a comment about what comes next */
```

- Improved C++ support (namespace/template/access)
- gatherHeaderdoc is now template-based
- PHP support (and a bunch of other languages) now included without patching
- Support for linking to other methods/data types within the same file
- Comment stripper
- Support for exceptions
- Now warns if tagged parameters don't match declaration
- Optional warning if parameters are not tagged
- Man page output path (via XML)
- Nested class handling

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- Customizable date format
- C pseudoclass support (`typedef struct`)
- @ignore—allows you to remove matching tokens from declarations
- "Unsorted" flag.
- Summary function/method lists (mini-TOC)
- Improved overall appearance

New Tags

This section attempts to list all of the new tags added in HeaderDoc 8 (some of which were actually available, but undocumented, in HeaderDoc 7).

These tags are preliminary, and may change prior to the final HeaderDoc 8 release.

`@classdesign`

Text block describing the overall design of a class.

`@coclass`

String describing a class that this class was designed to work with.

`@dependency`

String describing a class upon which this class depends heavily.

`@exception`

String describing an exception thrown by a function/method/class.

`@functiongroup`

Tag for grouping functions and methods. This takes priority over the *`@group`* tag with respect to functions and methods.

`@group`

Tag for grouping data, functions, etc.

(Note: the *`@functiongroup`* tag takes priority over the *`@group`* tag for functions.)

`@helper`

String telling what helper classes this class uses.

`@helps`

For helper classes, string telling what sort of classes this class was designed to help.

`@instancesize`

Text block containing the size of an instance of this class.

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`@methodgroup`

See `@functiongroup` .

`@ownership`

String describing what class instantiates the current class (e.g. I/O Kit nubs).

`@performance`

Text block to describe performance characteristics of a class (e.g. "This class is not appropriate for use in high-performance environments.)

`@security`

Text block to describe security considerations when using this class.

`@superclass`

Adds superclass info to a C pseudoclass. Also can be used to cause members of the superclass to be merged into the subclass.

`@throws`

See `@exception` .

Additional Notes

This section basically lists known errata for the public beta. We hope that many of these things will improve prior to the final HeaderDoc 8 release. If you find issues not listed here, please file bugs.

If you are an ADC member, you can file bugs against the HeaderDoc component using BugReporter. Otherwise, please file bugs using the OpenDarwin.org bug reporting page .

You may also wish to subscribe to the headerdoc-development mailing list for the latest up-to-date information about bugs, workarounds, and so on.

- The man page output path is currently somewhat manual. To convert a header, etc. to a set of man pages, do something like the following:

```
headerdoc2html [flags] -X filename.h

hdxml2manxml filename/filename.xml

xml2man filename/filename.xmml.mxml

mv filename/*.1 /path/to/man/man1
```

- HeaderDoc 8-beta includes a preliminary man page generation language. In this version, it was intended solely to process the output produced by HeaderDoc. This XML dialect is *not* feature-complete for general man page use. Thus, its syntax is subject to change.
- Code coloring does not work equally well for all languages. Specifically, code coloring is largely disabled for data types in for Pascal and MIG. There are probably other similar issues.

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Officially, code coloring is only supported for C/C++/Objective C, at least in this version. If you find a coloring bug in a non-C language, please ask on the headerdoc-development mailing list before filing a bug.

- Indentation and spacing for PHP function declarations leaves something to be desired.
- HeaderDoc 8 is somewhat slower than previous versions. This is because the entire parser has been rewritten from the ground up and now does a token-based parse of the input file.

  While this should significantly improve the correctness of output (colorizer bugs notwithstanding), it is doing a lot more work than before, and thus takes longer.

  There are a number of things that can eventually be done to improve this, such as precompiling the regular expressions. We hope to make such optimizations at a later date.

- HeaderDoc's default color scheme matches XCode coloring. There are a number of files supplied as alternative color schemes, ranging from pleasant to utterly hideous (used mainly for testing). Swap out your headerDoc2HTML.config file as desired.
- GatherHeaderDoc's default template is built-in. The format for this template is described in the documentation, and an example template (`exampletoctemplate.html`) is provided. To use that example template, you must modify the config file.

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