

Crowbook

Élisabeth Henry

Chapter 1

Crowbook

Render a book written in markdown to HTML, Epub or PDF.

Crowbook's purpose is to allow you to automatically generate multiple outputs formats from a book written in Markdown. Its main focus is novels, and the default settings should (hopefully) generate readable books with correct typography.

1.1 Example

To see what Crowbook's output looks like, you can read (a not-necessarily up-to-date version of) the Crowbook guide (containing this README.md file and additional documentation) rendered in HTML, PDF or EPUB.

1.2 Installing

Packages

If you are on Debian GNU/Linux or Ubuntu (on a PC architecture), you can download .deb packages on the releases page.

Binaries

See the releases page to download a precompiled binary for your architecture (currently: Linux, Windows and MacOSX). Just extract the archive and run crowbook (or crowbook.exe on Windows). You might also want to copy the binary somewhere in your PATH for later usage.

Building

You'll need to have the Rust compiler on your machine first; you can download and install it here. Once it is down:

\$ cargo install crowbook

will automatically download the latest crowbook release on crates.io and install it.

1.3 Usage

The simplest command is:

\$ crowbook <BOOK>

where BOOK is a configuration file. Crowbook will parse this file and generate a book in HTML, Epub, LaTeX, and/or PDF, according to the settings in the configuration file.

To create a new book, assuming you have a list of Markdown files, you can generate a template configuration file with the --create argument:

\$ crowbook --create my.book chapter_*.md

This will generate a default my.book file, which you'll need to complete. This configuration file contains some metadata, options, and lists the Markdown files.

For more information see the configuration file.

It is also possible to give additional parameters to crowbook; we have already seen --create, but if you want the full list, see the arguments.

1.4 Current features

Output formats

Crowbook should correctly support HTML and EPUB (either version 2 or 3) as output formats: rendered files should pass respectively the W3C validator and the IDPF EPUB validator for a wide range of (correctly Markdown formatted) input files. See the example book rendered in HTML and EPUB on github.io.

LaTeX/PDF output is a bit more tricky: it should work reasonably well for novels (the primary target of Crowbook), but pdflatex might occasionally choke on some "weird" unicode character. See the example book rendered in PDF on github.io.

ODT output is currently experimental at best. It might work with very basic formatting but still needs a *lot* of work. You can still see the example book rendered in ODT on github.io to have an idea of the current status for this output format.

Input format

Crowbook uses pulldown-cmark and thus should support most of CommonMark Markdown. Inline HTML, however, is not implemented, and probably won't be, as the goal is to have books that can also be generated in PDF (and maybe eventually ODT).

Maybe the most specific "feature" of Crowbook is that (by default, it can be deactivated) it tries to "clean" the input files. By default this doesn't do much (except removing superfluous spaces), but if the book's language is set to french it tries to respect french typography, replacing spaces with non-breaking ones when it is appropriate (e.g. in french you are supposed to put a non-breaking space before '?', '!', ';' or ':'). This feature is relatively limited at the moment, but I might try to add more options and support for more languages.

Links handling

Crowbook tries to correctly translate local links in the input Markdown files: e.g. if you have a link to a markdown file that is part of your book, it will be transformed into a link inside the document.

Inline YAML blocks

Crowbook supports inline YAML blocks:

author: Me title: My title

This is mostly useful when Crowbook is runned with the --single argument (receiving a single Markdown file instead of a book configuration file). E.g., the following Markdown file:

author: John Doe
title: A book

output.html: book.html

_ _ _

This is a very tiny book!

can be processed with crowbook --single foo.md or crowbook -s foo.md to produce the book.html file. This is useful for short texts that typically only contain one "chapter".

Bugs

See the github's issue tracker.

1.5 Contributors

• Stéphane Mourey <s+crowbook AT stephanemourey DOT fr>

1.6 Acknowledgements

Besides the Rust compiler and standard library, Crowbook uses the following libraries:

- pulldown-cmark
- yaml-rust
- mustache
- clap
- chrono
- uuid
- mime guess
- walkdir
- rust c-serialize

It also uses configuration files from rust-everywhere to use Travis and Appveyor to generate binaries for various platforms on each release.

While Crowbook directly doesn't use them, there was also inspiration from Pandoc and mdBook.

Also, the W3C HTML validator and the IDPF EPUB validator proved very useful during development.

1.7 ChangeLog

See ChangeLog.

1.8 Library

While the main purpose of Crowbook is to be runned as a command line, the code is written as a library, so if you want to build on it you can use it as such. You can look at the generated documentation on docs.rs.

1.9 License

Crowbook is free software: you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License (LGPL), version 2.1 or (at your option) any ulterior version. See LICENSE for more information.

Chapter 2

Arguments

Crowbook can takes a list of arguments:

Render a markdown book in Epub, PDF or HTML.

USAGE:

crowbook [FLAGS] [OPTIONS] [--] [BOOK]

FLAGS:

-h, --help Prints help information
-l, --list-options Lists all possible option
-s, --single Use a single Markdown file
instead of a book configuration file
-V, --version Prints version information

-v, --verbose Print warnings in

parsing/rendering

OPTIONS:

-c, --create <FILES>... Creates a new book with existing markdown files
-o, --output <FILE> Specifies output

-o, --output <FILE> Specifies output file

--print-template <TEMPLATE> default value of a template

--set <KEY_VALUES> Sets a list of book

Displays the

options

-t, --to <FORMAT> Generate specific

forma [values: epub, pdf, html, tex, odt]

ARGS:

 $<\!$ BOOK> File containing the book configuration, or a Markdown file when called with --single

Note that Crowbook generates output files relatively to the directory where <BOOK> is:

\$ crowbook foo/bar.book --to pdf --output baz.pdf

will thus generate baz.pdf in directory foo and not in current directory.

The most important option obviously <BOOK>, i.e. the file configuration book. It is mandatory for most options: if you don't pass it, crowbook will simply display this help message. In a normal use case this is the only argument you'll need to pass, and crowbook will generate the book in all formats specified in the configuration file.

It is, however, possible to pass more arguments to crowbook.

2.1 --create

 $Usage: crowbook [BOOK] --create file_1.md file_2.md \dots$

Creates a new book from a list of Markdown files. It will generate a book configuration file with all file names specified as chapters. It either prints the result to stdout (if BOOK is not specified) or generate the file BOOK (or abort if it already exists).

Examples

crowbook foo.book --create README.md ChangeLog.md
LICENSE.md

will generate a file foo.book containing:

author: Your name title: Your title

lang: en

Uncomment and fill to generate files

output.html: some_file.html
output.epub: some_file.epub
output.pdf: some_file.pdf

```
# Uncomment and fill to set cover image (for Epub)
# cover: some_cover.png
# List of chapters
+ README.md
+ ChangeLog.md
+ LICENSE.md
   while
crowbook --create README.md ChangeLog.md LICENSE.md
   will prints the same result, but to stdout (without creating a file).
   When crowbook is runned with --create, it can also uses the
keys/values set by --set (see below):
$ crowbook foo.book --create file1.md file2.md --set
author "Pierre Dupont" title "Mon œuvre" lang fr
   will generate a foo.book file containing
author: Pierre Dupont
title: Mon œuvre
lang: fr
# List of chapters
+ file1.md
+ file2.md
```

2.2 --single

usage: crowbook --single <FILE>
 (or crowbook -s <FILE>)

This options allows to pass crowbook a single Markdown file. This file can contain an inline YAML block to set some book options. Inline YAML blocks must start and end with a line with --- (three dashes). E.g.

author: Joan Doe

title: A short story

If this YAML block is not at the beginning of a file, it must also be preceded by a blank line.

This allows to not have to write a .book configuration file for a short story or an article. crowbook --single foo.md is roughly equivalent to having a book configuration file containing:

! foo.md

That is, the chapter heading (if any) won't be displayed in the output documents (though they still appear in the TOC).

Note that by default, using --single sets the tex.short option to true, using the LaTeX class of article instead of book.

2.3 --set

usage: crowbook <BOOK> --set [KEY] [VALUE]...

This options takes a list KEY VALUE pairs and allows to set or override a book configuration option. All valid options in the configuration files are valid as keys. For more information, see the configuration file.

Examples

\$ crowbook foo.book --set html.css style.css

will override the CSS for HTML generation (the html.css key) to style.css.

\$ crowbook foo.book --set author Foo --title Bar

will override the book title to Bar and its author to Foo.

2.4 --list-options

usage: crowbook --list-options
 (or crowbook -1)

Displays all the valid options to use, whether in a book configuration file, with --set, or in an inline YAML block.

2.5 --print-template

usage: crowbook --print-template template

Prints to stdout the built-in template. Useful if you want to customize the appearance of your document. E.g., if you want to modify the CSS used for HTML rendering:

```
$ crowbook --print-template html.css > my_style.css
# edit my_style.css in your favourite editor
$ crowbook my.book --set html.css my_style.css
# or add "html.css: my_style.css" in my.book
```

Note that it is possible to use this option in conjonction with --set, though it is currently only useful for EPUB template:

```
$ crowbook --print-template epub.template --set
epub.version 2
# Returns the template for Epub 2 (currently it is the
default one)
$ crowbook --print-template epub.template --set
epub.version 3
# Returns the template for Epub 3
```

2.6 --verbose

usage: crowbook <BOOK> --verbose

If this flag is set, Crowbook will print the warnings it detect while parsing and rendering. These warnings are typically related to the inclusion of non-local images, linking to Markdown files that are not part of the book, and so on.

2.7 --to

```
usage: crowbook <BOOK>--to [FORMAT]
  (or crowbook <BOOK> -t [FORMAT])
```

Generate only the specified format. FORMAT must be either epub, pdf, html, odt or tex.

If an output file for the format is not specified in the book configuration file, crowbook will fail to render PDF, ODT and Epub (whereas it will print HTML and Tex files on stdout). It is however possible to specify a file with the --output option.

Examples

crowbook --to html foo.book

will generate some HTML, and prints it either to the file specified by output.html in foo.book, or to stdout if it is not specified.

crowbook --to pdf --output foo.pdf foo.book

will generate a foo.pdf file,.

2.8 -- output

usage: crowbook <BOOK> --to <FORMAT> --output <FILE>
 (or crowbook -t <FORMAT> -o <FILE> <BOOK>)

Specifies an output file. Only valid when --to is used.

Note that Crowbook generates output files relatively to the directory where ${\tt BOOK}$ is:

\$ crowbook foo/bar.book --to pdf --output baz.pdf

will thus generate baz.pdf in directory foo and not in current directory.

Chapter 3

The configuration file

If you want to use Crowbook for your book, this configuration file is all you'll have to add (assuming you already have the book in Markdown files; if you don't, you'll also have to write a book first, but that's besides the scope of this document).

The format is not very complicated. This is an example of it:

```
# metadata
author: Joan Doe
title: Some book
```

lang: en

output.html: some_book.html

```
# list of chapters
```

- preface.md
- + chapter_1.md
- + chapter_2.md
- + chapter_3.md
- + chapter_4.md
- epilogue.md

Basically, it is divided in two parts:

- a list of options, under the form key: value, following YAML syntax.
- a list of Markdown files.

Lines starting with the # characters are comments and are discarded.

3.1 The list of files

There are various options to include a markdown file.

- + file_name.md includes a numbered chapter.
- - file_name.md includes an unnumbered chapter.
- ! file_name.md includes a chapter whose title won't be displayed (except in the table of contents); this is useful for e.g. including a copyright at the beginning or the book, or for short stories where there is only one chapter.
- 42. file_name.md specifies the number for a chapter.

So a typical usage might look like this:

```
! copyright.md
- preface.md
# We want first chapter to be Chapter 0 because we are programmers!
0. chapter_0.md
# Next chapters can be numbered automatically
+ chapter_1.md
+ chapter_2.md
...
```

There are two important things to note:

- 1. you must not use quotes around the file names.
- the path of these files are relative to the directory where your configuration file is. This means you can run crowbook books/my_trilogy/first_book/config.book without being in the book's directory.

Also note that you don't have to specify a title. This is because the title of the chapter is inferred from the Markdown document. To go back to our previous example:

```
+ chapter_1.md
```

does not specify a chapter title, because it will read it directly in chapter_1.md, e.g.:

The day I was born

. . .

You should have one and only one level-one header (i.e. chapter title) in each markdown file.

If you have more than one, Crowbook will print a warning and treat it as another chapter (numbered according to the scheme specified for including the file). It might however mess the table of contents in some cases (e.g. for Epub).

If you do *not* have a level-1 header in a markdown file:

- if it is a numbered chapter, Crowbook will infer a chapter name from the numbering scheme;
- if it is not numbered, chapter's title will default to the empty string and won't be displayed in the TOC.

3.2 Crowbook options

The first part of the configuration file is dedicated to pass options to Crowbook. This is YAML syntax, so each line should be of the form key: value. Note that in most cases you don't have to put string in quotes, e.g.:

```
title: My title
```

It is however possible (and sometimes necessary) to escape some characters to use quotes around strings:

```
title: "My: title!"
```

It is possible to use multiline strings with >- and then indenting the lines that are part of the string:

```
title: >-
  A
  long
  title
author: Joan Doe
```

will set title to "A long title". See block literals in YAML for more information on the various way to insert multiline strings (which mostly change the way newlines will or won't be inserted).

A final note on the syntax: all options must be set *before* the first chapter inclusion (that is, a line beginning with '+', '-', 'x.' (where x is a number) or '!').

Here is the complete list of options, with a short description. The usage of some of them is detailed later on.

Metadata

- author
 - **type**: string
 - default value: Anonymous
 - The author of the book
- title
 - type: string
 - default value: Untitled
 - The title of the book
- lang
 - type: string
 - default value: en
 - The language of the book
- subject
 - type: string
 - default value: not set
 - Subject of the book (used for EPUB metadata)
- description
 - **type**: string
 - default value: not set
 - Description of the book (used for EPUB metadata)
- cover

- **type**: path
- default value: not set
- File name of the cover of the book

Output options

- output.epub
 - type: path
 - default value: not set
 - Output file name for EPUB rendering
- output.html
 - **type**: path
 - default value: not set
 - Output file name for HTML rendering
- output.html_dir
 - type: path
 - default value: not set
 - Output directory name for HTML rendering
- output.tex
 - type: path
 - default value: not set
 - Output file name for LaTeX rendering
- output.pdf
 - type: path
 - default value: not set
 - Output file name for PDF rendering
- output.odt
 - type: path
 - default value: not set
 - Output file name for ODT rendering

Resources option

- resources.base_path
 - type: path
 - default value: not set
 - Path where to find resources (in the source tree). By default, links and images are relative to the Markdown file. If this is set, it will be to this path.
- resources.base_path.links
 - type: path
 - default value: not set
 - Set base path but only for links. Useless if resources.base path is set.
- resources.base_path.images
 - type: path
 - default value: .
 - Set base path but only for images. Useless if resources.base path is set.
- resources.base_path.files
 - type: path
 - default value: .
 - Set base path but only for additional files. Useless if resources.base_path is set.
- resources.out_path
 - **type**: path
 - default value: data
 - Paths where additional resources should be copied in the EPUB file or HTML directory
- resources.files
 - type: string
 - default value: not set
 - Whitespace-separated list of files to embed in e.g. EPUB file

Misc options

- enable_yaml_blocks
 - type: boolean
 - default value: false
 - Enable inline YAML blocks to override options set in config file
- zip.command
 - **type**: string
 - default value: zip
 - Command to use to zip files (for EPUB/ODT)
- numbering
 - type: integer
 - default value: 1
 - The maximum heading levels to number (0: no numbering,
 1: only chapters, ..., 6: all)
- display_toc
 - type: boolean
 - default value: false
 - If true, display a table of content in the document
- toc_name
 - type: string
 - default value: Table of contents
 - Name of the table of contents if toc is displayed in line
- autoclean
 - type: boolean
 - default value: true
 - Toggles cleaning of input markdown (not used for LaTeX)
- verbose
 - type: boolean

- default value: false
- If set to true, print warnings in Markdown processing
- side_notes
 - type: boolean
 - default value: false
 - Display footnotes as side notes in HTML/Epub
- temp_dir
 - type: path
 - default value: "
 - Path where to create a temporary directory (default: uses result from Rust's std::env::temp_dir())
- numbering_template
 - type: string
 - default value: "{{number}}. {{title}}"
 - Format of numbered titles
- nb_char
 - type: char
 - default value: '
 - The non-breaking character to use for autoclean when lang is set to fr

HTML options

- html.template
 - type: path
 - default value: not set
 - Path of an HTML template
- html.css
 - type: path
 - default value: not set

- Path of a stylesheet to use with HTML rendering
- html.print_css
 - type: path
 - * default value: not set
 - * Path of a stylesheet to use with media print in HTML rendering
- html.script
 - type: path
 - default value: not set
 - Path of a javascript file
- html.display_chapter
 - type: boolean
 - default value: true
 - Display one chapter at a time (with option to dislay all)

Multifile HTML options

- html_dir.script
 - **type**: path
 - default value: not set
 - Path of a javascript file
- html_dir.css
 - type: path
 - default value: not set
 - Path of a CSS template
- html dir.index.html
 - **type**: path
 - default value: not set
 - Path of index.html template
- html_dir.chapter.html
 - type: path
 - default value: not set
 - Path of a chapter.html template

EPUB options

- epub.version
 - **type**: integer
 - default value: 2
 - The EPUB version to generate
- epub.css
 - type: path
 - default value: not set
 - Path of a stylesheet to use with EPUB rendering
- epub.template
 - type: path
 - default value: not set
 - Path of an epub template for chapter

LaTeX options

- tex.short
 - type: boolean
 - default value: false
 - If set to true, use article class instead of book and a the default \maketitle command
- tex.links_as_footnotes
 - type: boolean
 - default value: true
 - If set to true, will add foontotes to URL of links in La-TeX/PDF output
- tex.command
 - type: string
 - default value: pdflatex
 - LaTeX flavour to use for generating PDF

- tex.template
 - type: path
 - default value: not set
 - Path of a LaTeX template file

Deprecated options

- base_path
 - type: DEPRECATED
 - default value: resources.base_path
 - Renamed
- base_path.links
 - type: DEPRECATED
 - default value: resources.base_path.links
 - Renamed
- base_path.images
 - type: DEPRECATED
 - default value: resources.base_path.images
 - Renamed

Note that these options have a type, which in most case should be pretty straightforward (a boolean can be true or false, an integer must be composed a number, a string is, well, any string). The path type might puzzle you a bit, but it's equivalent to a string, except Crowbook will consider it relatively to the book file.

Output options

These options specify which files to generate. You must at least set one of this option, or Crowbook won't do anything.

Recall that all file paths are relative to the directory where the config file is, not to the one where you run crowbook. So if you set

```
output.epub = foo.epub
```

and runs

\$ crowbook some/dir/config.book

foo.epub will be generated in some/dir, not in your current directory.

Crowbook will try to generate each of the output.xxx files that are specified. That means that you'll have to set at least one of those if you want a call to

\$ crowbook my.book

to generate anything. (It's still possible to generate a specific format, and only this one, by using the --to argument on the command line).

Note that some formats depend on some commands being installed on your system. Most notably, Crowbook depends on LaTeX (pdflatex by default, though you can specify the command to use with tex.command) to generate a PDF file, so PDF rendering won't work if it is not installed on your system. Crowbook also uses the zip command to generate the EPUB and ODT, files.

Current output options are:

- output.html: renders a standalone HTML file;
- output.html_dir: render a HTML directory with one page by chapter;
- output.epub: renders an EPUB file;
- output.tex: renders a LaTeX file;
- output.pdf: renders a PDF file (using tex.command).

Resources options

These two options allow to embed additional files for some formats (currently, only EPUB). This can be useful for embedding fonts.

resources.files

A list of files or directories that should be added. It's a whitespace-separated list, so it can be, e.g.:

resources.files: font1.otf font2.otf

It is also possible to specify a directory (or multiple directories). So if you have a fonts directories containing font1.otf and font2.otf,

resources.files: fonts

will be equivalent to:

resources.files fonts/font1.otf fonts/font2.otf

default: not set

resources.path

This option determine where (in which directory), in the resulting document, will those files be copied. The default is data, so by default the resources.files in the first example above will search font1.otf and font2.otf *in the same directory than the .book file, and will copy them to data/font1.otf and data/font2.otf in the EPUB file. This is therefore this last path that you should use if you want to access those files e.g. in a custom CSS stylesheet.

Note that if you pass directories to resources.files, the whole directory would be copied. So assuming fonts/contains font1.otf and font2.otf

resources.files: fonts resources.path: data

will copy these two files to data/fonts/font1.otf and data/fonts/font2.otf (and not data/font1.otf and data/font2.otf).

Similarly, the whole path of resources.files is copied, so

resources.files: fonts/font1.otf fonts/font2.otf

will yield the same result.

default: data

Generic options for rendering

numbering

An integer that represents the maximum level of numbering for your book. E.g., 1 will only number chapters, while 2 will number chapters, sections, but not anything below that. 6 is the maximum level and turns numbering on for all headers.

default: 1

numbering template

A string that will be used for chapter titles. You can use {{number}} and {{title}} in this string, e.g.:

numbering_template: "Chapter {{number}} {{title}}"

Note that:

- in this case, quoting is necessary because { and } have special meaning in YAML;
- this string won't be used for unnumbered chapters;
- this string isn't currently used by LaTeX, either.

autoclean

This option cleans a bit the input markdown. With the default implementation, it only removes consecutive spaces, which has not real impact (they are ignored anyway both by HTML viewers and by La-TeX).

However, if lang is set to fr, it also tries to add non-breaking spaces in front (or after) characters like '?', '!', ';' to respect french typography.

ChangeLog

0.6.0 (2016-09-09)

- Deprecated options:
 - nb_char: since it was only used for french cleaner and for typography reasons it's better to use different non breaking spaces according to context, this option was not really useful anymore.
- Rendering:
 - Images are now displayed at 80% width of the page.
- Bugfixes:
 - Image paths are now found correctly in LaTeX and EPUB rendering even if crowbook is called from another directory.
 - Fixed a bug in French cleaner when a string to clean ended by a non-breaking space (space was doubled with a breaking one).
 - LaTeX/PDF:
 - * "Autocleaning" is now also activated (for french at least) for LaTeX rendering, since it doesn't correctly insert non-breaking spaces for e.g. '«' or '»'.
 - \ast Fixed escaping of -- to $-\{\}-$ to avoid tex ligatures.
 - HTML/EPUB:
 - * html.display_chapter now defaults to false (e.g., by default the HTML displays the entirety of a book).
 - * Fixed rendering of lists when lang is set to fr.

* Links are now HTML-escaped, fixing errors in XHTML (for EPUB rendering) when links contained '&' character.

$0.5.1 \ (2016-04-14)$

Mostly rendering fixes:

- Epub:
 - Fix a validation problem when book contained hidden chapters.
- French cleaner:
 - Use semi-cadratine space instead of cadratine space for dialogs.
 - Use non-narrow non-breaking spape instead of narrow one for ':', '«' and '»' (following https://fr.wikipedia.org/wiki/Espace ins%C3%A9cable#En France).

• HTML:

- Add viewport meta tags.
- Standalone HTML:
 - * Don't display the button to display chapter and the previous/next chapter link if html.display_chapter is set to false.
 - Fix chapter displaying when some chapters are not numbered.
- Multi-files HTML:
 - * Fix previous/next chapter display to make it consistent with standalone HTML.

$0.5.0 \ (2016-04-02)$

- Crowbook now requires Ruste 1.7.0.
- It is now possible to render HTML in multiple files:
 - output.html_dir will activate this renderer, and specify in which directory to render these files;

- html_dir.css allows to override the CSS for this rendering;
- html_dir.index.html allows to specify a template for the index.html page;
- html_dir.chapter.html allows to specify a template for the chapters pages.

• New book options:

- tex.short: if set to true, the LaTeX renderer will use article instead of book as document class, and will use the default \maketitle command for article. This option is by default set to false, except when Crowbook is called with --single.
- enable_yaml_blocks: parsing YAML blocks is no longer activated by default, except when using --single. This is because you might want to have e.g. multiple short stories using YAML blocks to set their titles and so on, and a separate .book file to render a book as a collection of short stories. In this case, you wouldn't want the displayed title or the output.pdf/html/epub files be redefined by the short stories .md files.
- html.print_css: allows to specify a stylesheet for media print
- html.display_chapter: displays one chapter at a time in standalone HTML
- html.script: allows to specify a custom javascript file for standalone HTML
- html_dir.script: same thing for multipage HTML
- resources.base_path: by default, Crowbook resolves links in markdown files relatively to markdown file. This option allows to resolve them relatively to a base path. This option comes with variants, resources.base_path.images resources.base_path.links, which only activate it for respectively images tags and links tags. These two options are ignored when base_path is set. There is also resources.base_path.files which specify additional files (see below) should be read, but this is one is set to . (i.e., the directory where the .book file is) by default.

- resources.files: indicate a (whitespace-separated) list of files that should be embedded. Currently only used with the EPUB renderer.
- resources.out_path: indicate where resources.files should be copied in the final document. Default to data, meaning that files will be placed in a data directory in the EPUB.

• Rendering:

- Templates can now use localized strings according to the lang option
- Standalone HTML now includes locale files using base64.
- Standalone HTML displays one chapter at a time, thouht it can be changed via a button in the menu.
- HTML/EPUB: default CSS now uses the lang value do determine how to display lists (currently the only difference is it uses "-" when lang is set to "fr" and standard bullets for other languages).

• Bugfixes:

- Fixed a bug of filename "resolution" when Crowbook was called with --single (e.g., crowbook -s tests/test.md would previously try to load 'tests/tests/test.md).
- Epub renderer now uses the mime_guess library to guess the mime type based on extension, which should fix the mime type guessed for a wide range of extensions (e.g., svg).

• Internal/API:

The Book::new, new_from_file, and new_from_markdown_file take an additional options parameter. To create a book with default options, set it to &[].

$0.4.0 \ (2016-03-01)$

 Crowbook now internally uses a true YAML parser, yaml_rust, for its options. Since the "old" Crowbooks's config format was similar, but had some subtle differences, this is somewhat of a breaking change:

- strings should now be escaped with "" in some cases (e.g. if it contains special characters). On the other hand, it allows to optionally escape a string with these quotes, which wasn't possible until then and might be useful in some cases.
- multiline strings now follow the YAML format, instead of the previous "YAML-ish" format. This can impact the way newlines are added at the end of a multiline string. See e.g. this link for the various ways to include multiline strings in Yaml.
- Crowbook now parses YAML blocks (delimited by two lines with "---") in Markdown files, ignoring keys that it doesn't recognize. This allows crowbook to be compatible(-ish) with Markdown that contains YAML blocks for Jekyll or Pandoc.
- New option --single allows to give Crowbook a single Markdown file (which can contain options within an inline YAML block) instead of a book configuration file. This is useful for e.g. short stories.
- Enhanced the way debugging/warning/info messages are handled and displayed:
 - Added a --debug option to the binary.
 - Internal: added a Logger struct.
 - Different levels of information (debug/warning/info/error) get different colours.

• Bugfixes:

Crowbook no longer crashes when called with the --to argument if it can't create a file.

0.3.0 (2016-02-27)

- Crowbook now tries to convert local links. That is, if you link to a Markdown file that is used in the book. (e.g. README.md), it *should* link to an appropriate inner reference inside the book.
- \bullet Latex renderer now supports (local) images.
- Epub renderer now embed (local) images in the EPUB file.

- Some changes to the HTML/Epub stylesheets.
- Internal (or usage as a library):
 - Crowbook no longer changes current directory, which worked in the binary but could cause problem if library was used in multithreaded environment (e.g. in cargo test).
 - More modules and methods are now private.
 - Improved documentation.
 - Added more unit tests.

• Bugfixes:

 Epub renderer now correctly renders unnumbered chapter without a number in its toc.ncx file

$0.2.2 \ (2016-02-25)$

- Bugfixes:
 - French cleaner now correctly replaces space after (in e.g. dialogs) with "em space".

$0.2.1 \ (2016-02-25)$

- Bugfixes:
 - HTML/Epub rendering no longer incorrectly increment chapter count for unnumbered chapters.
 - Latex: makes what is possible to avoid orverflowing the page.
- Minor changes:
 - Latex: improvement of the default way URLs are displayed.

$0.2.0 \ (2016-02-25)$

- Command line arguments:
 - New argument --print-template now allows to print a built-in template to stdout.

- New argument --list-options prints out all valid options in a config file (or in set), their type and default value.
- New argument --set allows to define or override whatever option set in a book configuration.
- --create can now be used without specifying a BOOK, printing its result on stdout.

• Configuration file:

- Added support for multiline strings in .book files, with either '|' (preserving line returns) or '>' (transforming line returns in spaces)
- New option display_toc allows to display the table of contents (whose name, at least for HTML, is specified by toc_name) in HTML and PDF documents.
- Option numbering now takes an int instead of a boolean, allowing to specify the maximum level to number (e.g. 1: chapters only, 2: chapters and section, ..., 6: everything).

• Rendering:

- Added support for numbering all headers, not just level-1 (e.g., having a subsection numbered 2.3.1).
- Tables and Footnotes are now implemented for HTML/Epub and LaTeX output.

• Internal:

 Refactored Book to use an HashMap of BookOptions instead of having like 42 fields.

0.1.0 (2016-02-21)

• initial release

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the $\rm GNU/Linux$ operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

1. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion

of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

 You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 1. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

d) If a facility in the modified Library refers to a function or a

table of data to be supplied by an application program that uses

the facility, other than as an argument passed when the facility

is invoked, then you must make a good faith effort to ensure that.

in the event an application does not supply such function or

table, the facility still operates, and performs whatever part of $% \left\{ 1\right\} =\left\{ 1\right\} =$

its purpose remains meaningful.

(For example, a function in a library to compute square roots has

a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must

be optional: if the application does not supply it, the square

root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

1. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

1. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

1. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

1. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever

changes were used in the work (which must be distributed under

Sections 1 and 2 above); and, if the work is an executable linked

with the Library, with the complete machine-readable "work that

uses the Library", as object code and/or source code, so that the

user can modify the Library and then relink to produce a modified

executable containing the modified Library. (It is understood

that the user who changes the contents of definitions files in the

Library will not necessarily be able to recompile the application

to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the

Library. A suitable mechanism is one that (1) uses at run time a

copy of the library already present on the user's computer system,

rather than copying library functions into the executable, and (2)

will operate properly with a modified version of the library, if

the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy

from a designated place, offer equivalent access to copy the above $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right$

specified materials from the same place.

e) Verify that the user has already received a copy of these

materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 1. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
- a) Accompany the combined library with a copy of the same work

based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the

Sections above.

b) Give prominent notice with the combined library of the fact

that part of it is a work based on the Library, and explaining

where to find the accompanying uncombined form of the same work.

- 1. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 2. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions

are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

- 3. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 1. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 1. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 2. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

1. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

2. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO PERMITTED BYTHE EXTENT APPLICABLE EXCEPT OTHERWISE LAW. WHEN STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND

FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

3. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE. BELIABLE TO YOU FOR DAMAGES. INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of
what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or

modify it under the terms of the GNU Lesser General Public

License as published by the Free Software Foundation; either

version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,

but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU

Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public

License along with this library; if not, write to the Free Software

Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice That's all there is to it!