

Table of Contents

- Introduction 2
 - Background 2
 - Architecture 2
- Features 3
 - Typography 3
 - Word Wrapping 3
 - Alignment 3
 - Shapes 3
- API Reference 4
 - Document Lifecycle 4
 - Page Management 4
 - Content Methods 4

Introduction

This document demonstrates the PDF::Make::Builder table of contents feature. Headings marked with `toc => 1` are automatically collected and rendered on the TOC page with dot leaders and page numbers. The TOC supports multiple heading levels.

Background

PDF::Make is a from-scratch PDF generation library for Perl. The Builder layer provides a high-level API with automatic word-wrapping, font management, and coordinate translation. It sits on top of the low-level Canvas operators.

Architecture

Builder uses Object::Proto for call-checker-optimised typed slots. Each component - Text, Shape, Font, Page - is a separate Object::Proto class with typed properties and method chaining.

Features

Typography

Builder supports all 14 standard PDF fonts across three families: Helvetica, Times, and Courier. Each family includes regular, bold, italic, and bold-italic variants.

Word Wrapping

Text is automatically wrapped to fit within the available page width. The word-wrap algorithm uses approximate character widths for each Standard 14 font to calculate line breaks.

Alignment

Text can be aligned left, center, or right within its container. Each line is positioned independently using absolute text matrix positioning.

Shapes

Builder provides line, box, circle, ellipse, and pie/arc shapes. Circles and ellipses are approximated using four cubic Bezier curves.

API Reference

Document Lifecycle

Create a Builder, add pages and content via chained `add_*` calls, then call `save()` to finalize. Headers and footers are rendered at save time across all pages.

Page Management

Pages support configurable sizes (A4, Letter, Legal, etc.), multi-column layouts, padding, and optional headers/footers. Content automatically flows to the next page when overflow is enabled.

Content Methods

All `add_*` methods return `$self` for chaining: `add_text`, `add_h1` through `add_h6`, `add_line`, `add_box`, `add_circle`, `add_ellipse`, `add_pie`, `add_image`, `add_toc`.