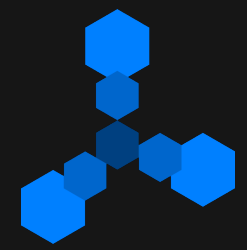


HexaPDF

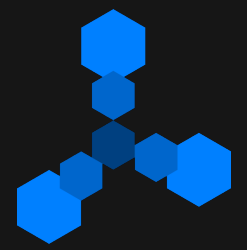
Versatile PDF Manipulation and Creation Library for Ruby

<https://hexapdf.gettalong.org>



What is HexaPDF?

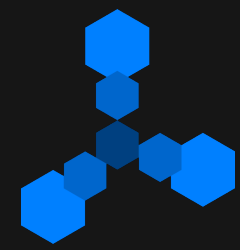
- Complete PDF solution
- Written in pure Ruby
- Accompanying CLI tool



Example HexaPDF Script

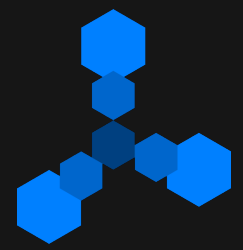
```
require 'hexapdf'

doc = HexaPDF::Document.new
canvas = doc.pages.add.canvas
canvas.font('Helvetica', size: 100)
canvas.text("Hello World!", at: [20, 400])
doc.trailer.info[:Title] = 'Example Document'
doc.encrypt(owner_password: 'fukuoka', permissions: [:print])
doc.write("hello_world.pdf", optimize: true)
```



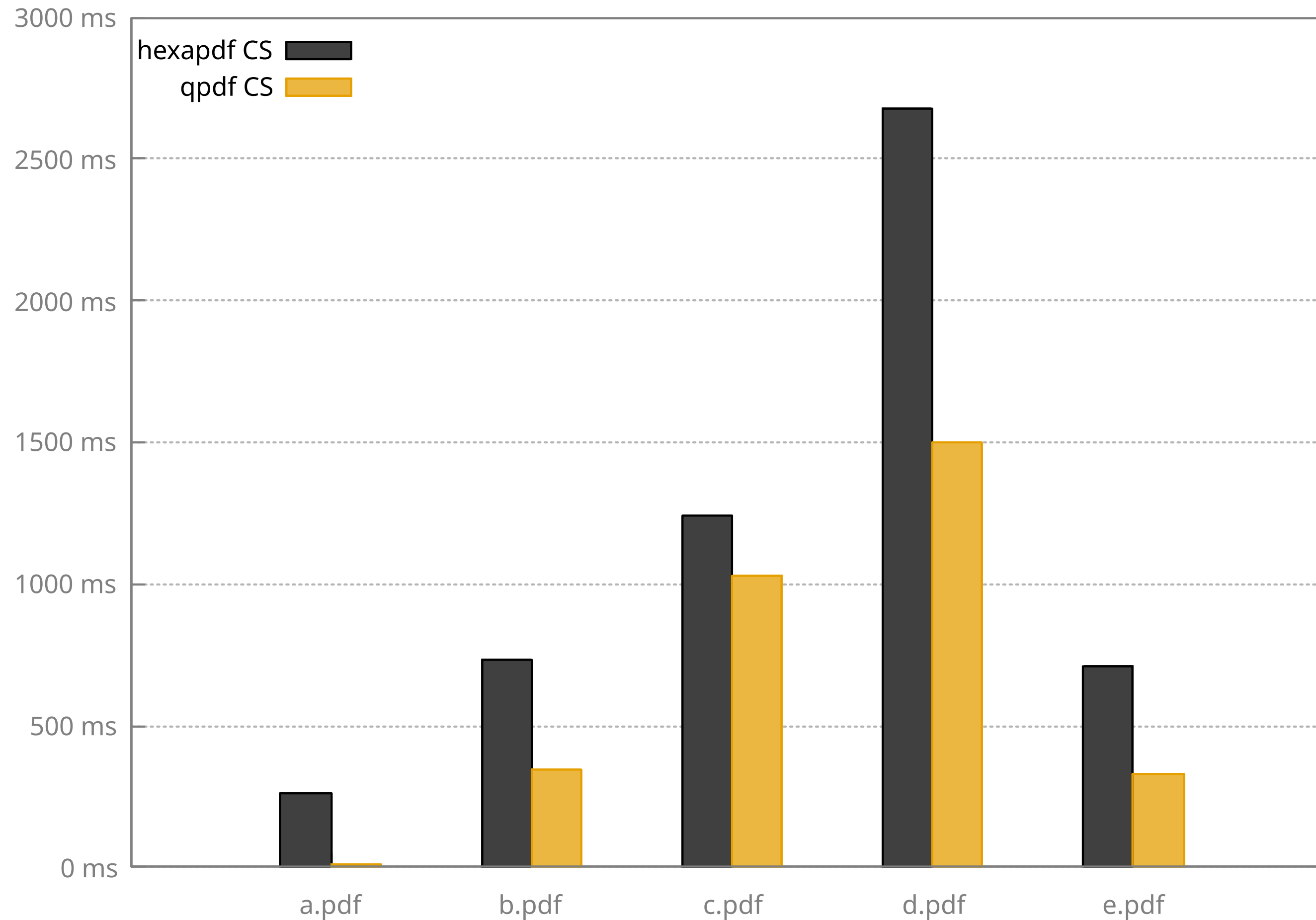
What makes HexaPDF stand out?

- Designed from start with performance and low memory usage in mind
- Ruby-esque API
- Simple DSL for defining PDF types in Ruby
- Low-level API with convenience API on top
- Fully-tested with 100% code coverage

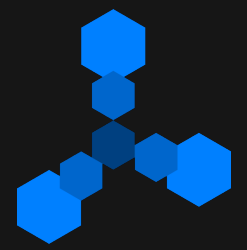


File Size Optimization Benchmark

Optimization Benchmark - Time, lower is better

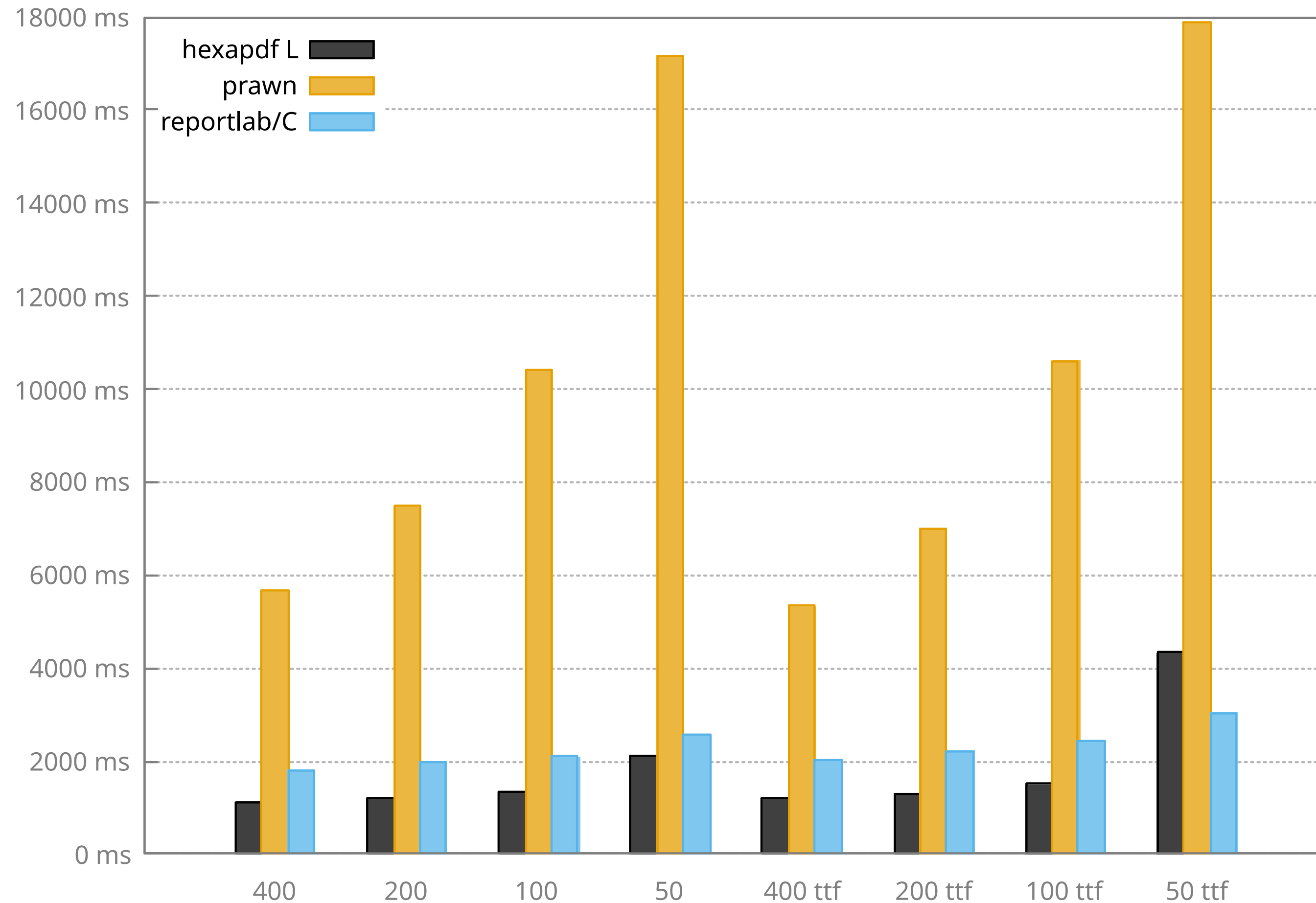


- Compress PDF as good as possible
- qpdf is written in C++
- HexaPDF only 2x slower

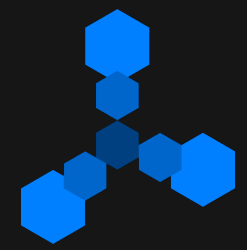


Line Wrapping Benchmark

Line Wrapping Benchmark - Time, lower is better

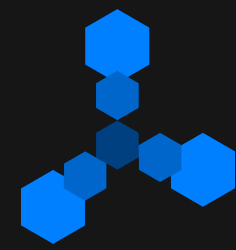


- Wrap text into lines
- Prawn Ruby gem for PDF generation
- reportlab Python PDF generation library with C extension
- HexaPDF is much faster than Prawn



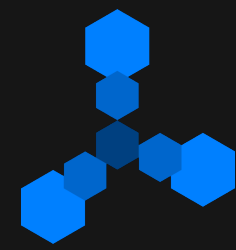
Why implement HexaPDF in Ruby?

- Language of choice for most programming tasks
- Fast development, especially for complex tasks
- Easy and succinct use of PDF objects due to direct mapping to standard Ruby types



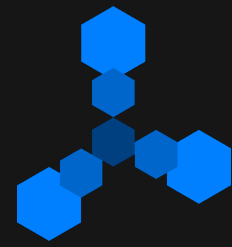
Impact of HexaPDF

- PDFs are everywhere, e.g. government forms, invoices, manuals, ...
- Digitally signing PDFs became more important due to the pandemic
- HexaPDF makes working with PDFs in Ruby easy and straightforward
- Contributions to the Prawn project
- Helping strangers with their PDF problems/automation needs

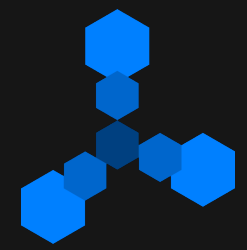


Conclusion

- HexaPDF was only possible because of Ruby
- Ruby is already fast for this type of library/application
- HexaPDF will become the go-to PDF library for Ruby
- Developing HexaPDF in Ruby was and is still fun



Thank you!



Addendum

- This PDF file is also a valid Ruby source file
- Run it like ``ruby talk.pdf output.pdf`` to generate the PDF
- All necessary files are embedded into the PDF