Taming a Collaborative OPM Reference Manual

OPM-OP:

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NORCE: Håkon Hægland

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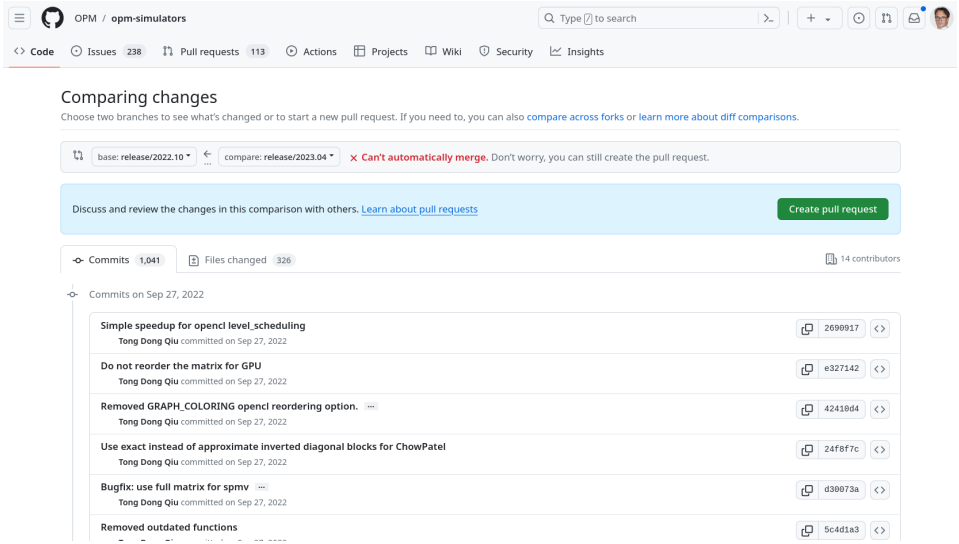
Remembering great People taken from us

Figure: Ove Sævareid (NORCE) and David Baxendale (OPM-OP) left us 2023

Replacing one takes more than one

- Reservoir Engineer and Writer: Matthew Goodfield (OPM-OP)
- Specialist for LibreOffice and Python: Håkon Hægland (NORCE)
- Me as the slow reviewer
- Fixers: External people, e.g. Peter Kirkham

Writing documentation is easy



Let's be more realistic

Just looking at one repository: opm-simulators

period	PRs	commits
since 2023.10	280	566
2023.04-2023.10	552	237
2022.10-2023.04	502	321
2022.04-2022.10	406	201
2021.10-2022.04	377	203
2021.04-2021.10	320	679
2020.04-2021.04	238	502

Developers speak different languages

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- Many natural languages
- Lots of different scientific background
- Main audience: Reservoir Engineers

We love to write documentation

Famous last words of developers

- This is now working, let's make PR.
- I'll document it later...
- Our (code) documentation is always up to date

A Blackbox-Manual that writes itself

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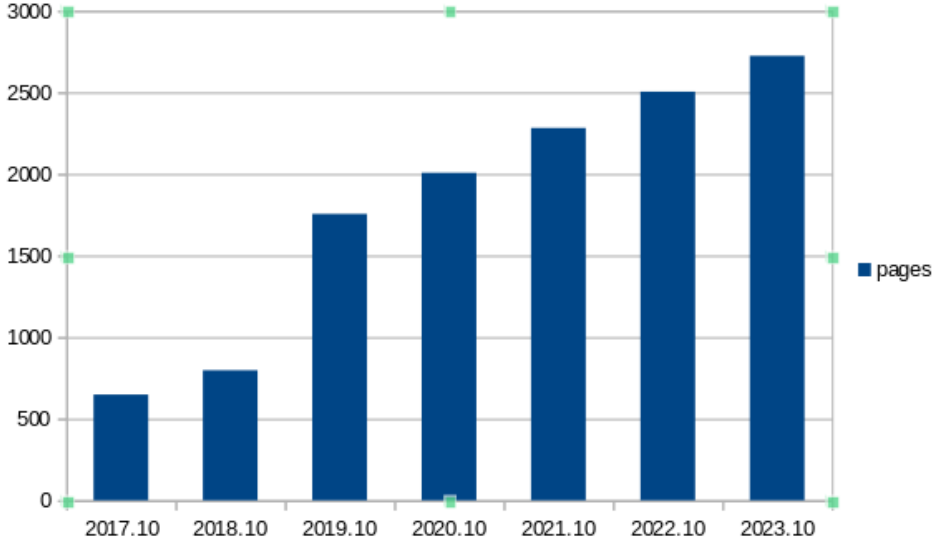
- Written by experienced reservoir engineer
- Manual revision control
- Contributors send text for new keywords
- Developer review of pre-version(?)

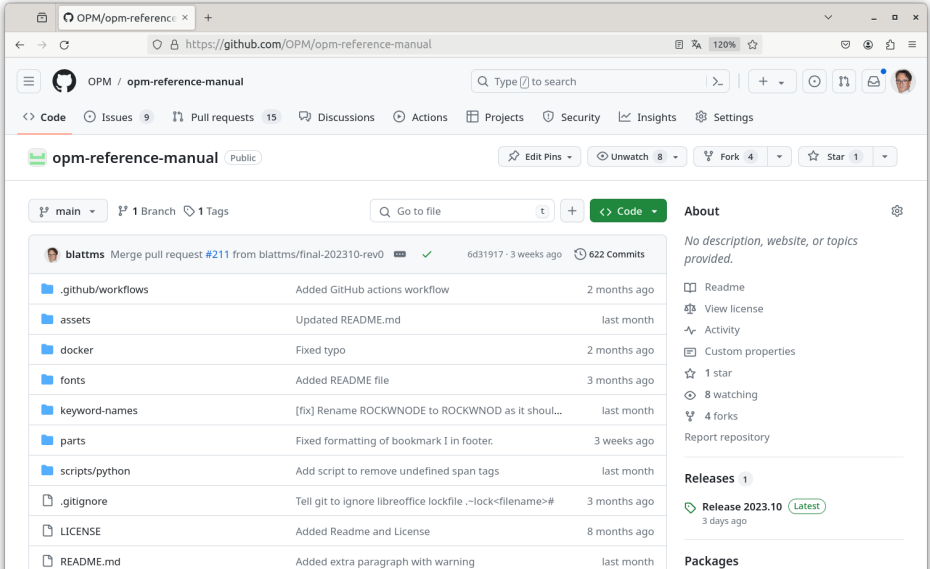
Lots of pages and growing



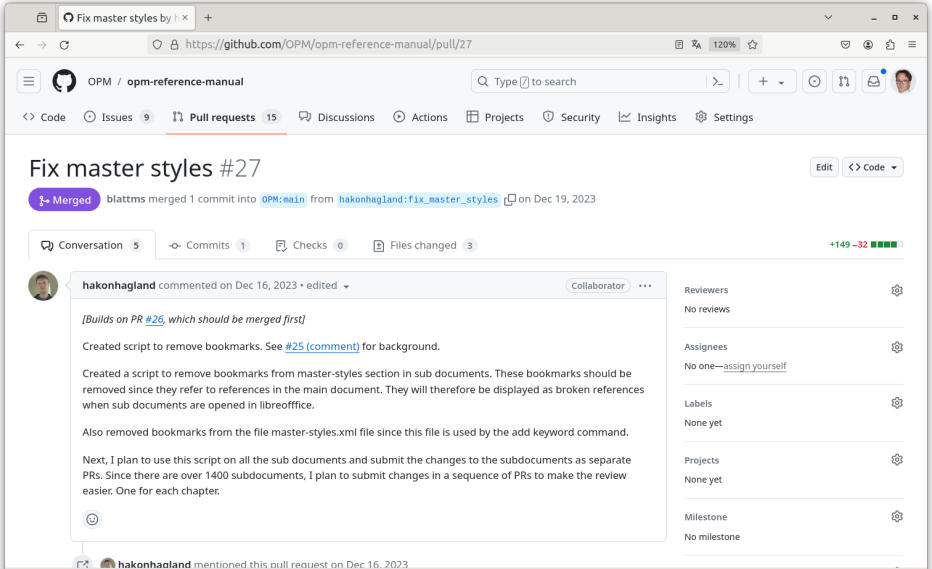
Quirks

- Source not openly available
- Not all LibreOffice can open it on every machine

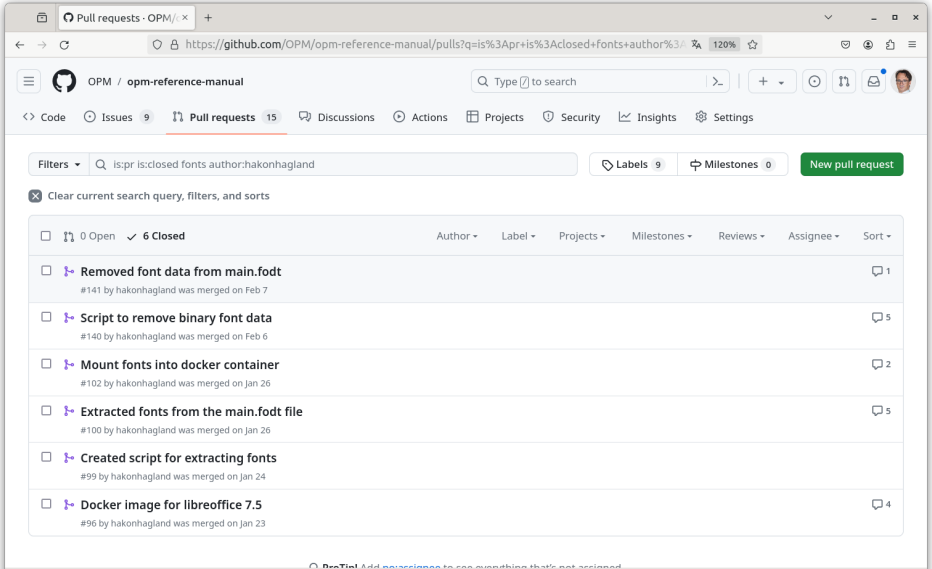
Openly available on GitHub



Remove styles to make XML easier



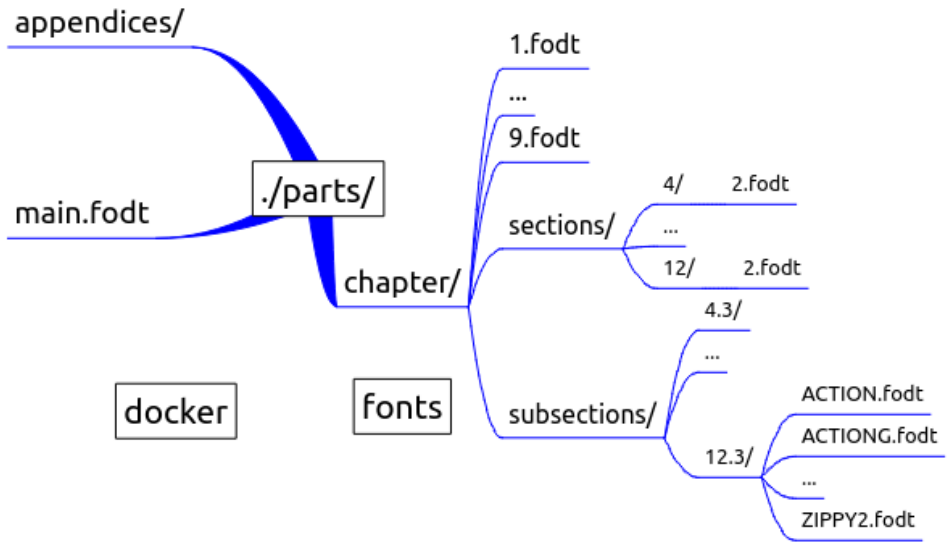
No need for embedded fonts



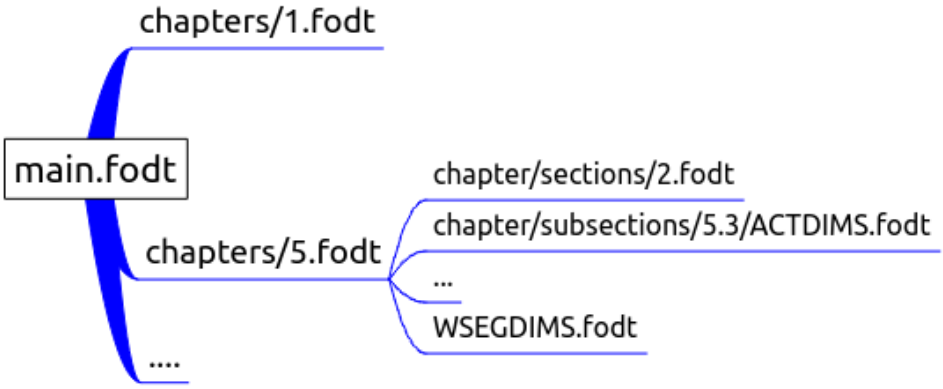
Lots of other author work

- New keywords
- Lots of fixes
- about 300 PRs

Document file directory layout



Document master document layout



Python scripts

- for repetitive editing tasks
- for building and running docker

Docker LibreOffice Version

Takes care of correct version and fonts

Easiest way for developers (same old)

Write good PR descriptions for those 500 PRs

- What changed?
- Why?
- Categorize it

Best way for (small) changes

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4 parts/chapters/subsections/12.3/DRSDTR.fodt

Viewed

```
@@ -4383,7 +4383,7 @@ Updated with AFR/TSA Rev-D comments and new keywords.</dc:description><meta:init
4383 4383      <text:p text:style-name="P14710">Table <text:sequence text:ref-name="refTable564"
               text:name="Table" text:formula="ooow:Table+1" style:num-format="1">12.22</text:sequence>: DRSDTR
               Keyword Description</text:p>
4384 4384      <text:p text:style-name="P15538"/>
4385 4385      <text:p text:style-name="_40_TextBody">Note this keyword can be used in history matching field
               performance to control the availability of the movable gas phase.</text:p>
4386         -  <text:p text:style-name="_40_TextBody">See also the VAPPAR keyword in the SOLUTION section and the
               DRSDT, DRVDT and DRVDTR keywords in the SCHEDULE section that controls how vaporized oil is treated
               and the rate at which the dissolved phase ratio increases within a grid block.</text:p>
     4386    +  <text:p text:style-name="_40_TextBody">See also the VAPPARS keyword in the SOLUTION section and
               the DRSDT, DRVDT and DRVDTR keywords in the SCHEDULE section that controls how vaporized oil is
               treated and the rate at which the dissolved phase ratio increases within a grid block.</text:p>
4387 4387      <text:p text:style-name="_40_TextBody">This keyword is not supported by OPM Flow but has no effect
               on the results so it will be ignored but is documented here for completeness, as it is expected to be
               available in the next release of OPM Flow.</text:p>
4388 4388      <text:h text:style-name="P18563" text:outline-level="4"><text:bookmark-start
               text:name="__RefHeading___Toc716565_3964674244"/>Examples<text:bookmark-end
```

Figure: Edit the xml files if possible

Adding new keywords

Creates new keyword file in subsection 4.3 with appropriate links to it

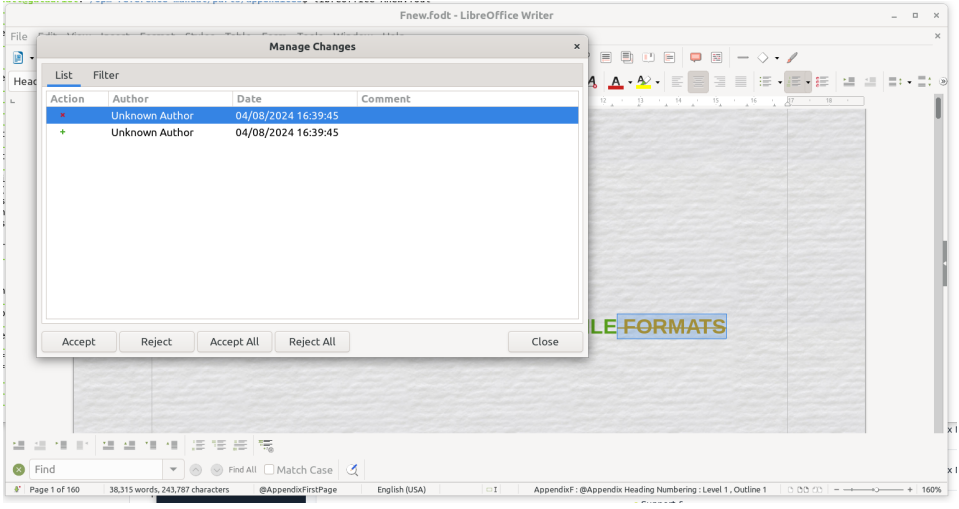
```
  fodt-add-keyword --maindir=../parts \
--keyword=HELLO --section=4.3 \
--title="Hello World" --status=green
```

Using LibreOffice

- Only edit leaf documents
- Use docker image if possible
- Only use default styles, etc.

LibreOffice does not care about nice diffs

LibreOffice compares Documents



Reference Manual still writes itself

- Open development process
- Take care with libreoffice
- Matthew will make manual consistent

Contact and questions

For question about the talk or OPM and support for it please contact

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