Taming a Collaborative OPM Reference Manual

OPM-OP:
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Oslo

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Remembering great People taken from us 2023

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

<table>
<thead>
<tr>
<th>period</th>
<th>PRs</th>
<th>commits</th>
</tr>
</thead>
<tbody>
<tr>
<td>since 2023.10</td>
<td>280</td>
<td>566</td>
</tr>
<tr>
<td>2023.04-2023.10</td>
<td>552</td>
<td>237</td>
</tr>
<tr>
<td>2022.10-2023.04</td>
<td>502</td>
<td>321</td>
</tr>
<tr>
<td>2022.04-2022.10</td>
<td>406</td>
<td>201</td>
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<tr>
<td>2021.10-2022.04</td>
<td>377</td>
<td>203</td>
</tr>
<tr>
<td>2021.04-2021.10</td>
<td>320</td>
<td>679</td>
</tr>
<tr>
<td>2020.04-2021.04</td>
<td>238</td>
<td>502</td>
</tr>
</tbody>
</table>
Developers speak different languages

- 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

• 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
Fix master styles #27

Merged  blattms merged 1 commit into OPM.main from hakonhagland:fix_master_styles on Dec 19, 2023

hakonhagland commented on Dec 16, 2023 · edited

[Builds on PR #26, which should be merged first]

Created script to remove bookmarks. See #25 (comment) for background.

Created a script to remove bookmarks from master-styles section in sub documents. These bookmarks should be removed since they refer to references in the main document. They will therefore be displayed as broken references when sub documents are opened in libreoffice.

Also removed bookmarks from the file master-styles.xml file since this file is used by the add keyword command.

Next, I plan to use this script on all the sub documents and submit the changes to the subdocuments as separate PRs. Since there are over 1400 subdocuments, I plan to submit changes in a sequence of PRs to make the review easier. One for each chapter.
Lots of other author work

- New keywords
- Lots of fixes
- about 300 PRs
Document master document layout

main.fodt

chapters/1.fodt

chapters/5.fodt

chapter/sections/2.fodt

chapter/subsections/5.3/ACTDIMS.fodt

WSEGDIMS.fodt
Python scripts

- for repetitive editing tasks
- for building and running docker
Docker LibreOffice Version

Takes care of correct version and fonts
Write good PR descriptions for those 500 PRs

- What changed?
- Why?
- Categorize it
Best way for (small) changes

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Table

<table>
<thead>
<tr>
<th>4383</th>
<th>4383</th>
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<tbody>
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<td>&lt;text:p text:style-name=&quot;P14710&quot;&gt;Table &lt;text:sequence text:ref-name=&quot;refTable564&quot; text:name=&quot;Table&quot; text:formula=&quot;ooow:Table+1&quot; style:num-format=&quot;1&quot;&gt;12.22&lt;/text:sequence&gt;</td>
<td>DRSDTR Keyword Description <a href="">text:p</a></td>
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</table>

Note this keyword can be used in history matching field performance to control the availability of the movable gas phase. 

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. 

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. 

Examples

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**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 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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