OPM overview
Alf B. Rustad, Statoil
We are growing

In a Nutshell, Open Porous Media...

... has had 28,432 commits made by 107 contributors representing 1,450,500 lines of code

... is mostly written in C++ with a well-commented source code

... has a well-established, mature codebase maintained by a very large development team with increasing Y-O-Y commits

... took an estimated 404 years of effort (COCOMO model) starting with its first commit in February, 2008 ending with its most recent commit about 1 month ago

Activity

<table>
<thead>
<tr>
<th>30 Day Summary</th>
<th>12 Month Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>428 Commits</td>
<td>5933 Commits</td>
</tr>
<tr>
<td>18 Contributors</td>
<td>Up + 2007 (51%) from previous 12 months</td>
</tr>
<tr>
<td>3 New Languages: XSL Transformation added Apr 4</td>
<td>41 Contributors</td>
</tr>
<tr>
<td>Python added Apr 4</td>
<td>Up + 11 (96%) from previous 12 months</td>
</tr>
<tr>
<td>Autoconf added Apr 4</td>
<td></td>
</tr>
</tbody>
</table>

Commits per Month

Languages

- C++ 54%
- C 20%
- XML 11%
- 23 Other 15%

Lines of Code
We are in the cloud...
OPEN POROUS MEDIA

The Open Porous Media (OPM) initiative encourages open innovation and reproducible research for modeling and simulation of porous media processes.

OPM coordinates collaborative software development, maintains and distributes open-source software and open data sets, and seeks to ensure that these are available under a free license in a long-term perspective.

Current development is focused on CO₂ sequestration and improved enhanced oil recovery, but contributions extend to different fields.
The wiki is still around

OPM

Main Page

Getting started with OPM

We have a Quick installation guide, showing how to install the opm-core library.

The tutorials section contains some tutorials for programmers using opm-core.

Consult the User’s Guide for information on using the wiki software.

Please note that the content of this wiki is in the process of being updated, many parts are not current!

User documentation for clients
The mailing list too

Program for the OPM meeting available

Dear OPM community,

The program for the OPM meeting is ready, and can be viewed at

http://opm-project.org/?p=664

Please direct any questions to me or Tor Harald Sandve.

Atgeirr

Opm mailing list
Opm <at> opm-project.org
http://opm-project.org/cgi-bin/mailman/listinfo/opm

Problems compiling the new version of OPM

Having had no major problems with compiling OPM back in january, I am now trying to upgrade to the latest version.

No problems with the first 6 modules (common, parser, material, core, grid, output) except that I had...
Github of course
Jenkins

![Jenkins Dashboard](https://ci.opm-project.org)

<table>
<thead>
<tr>
<th>S</th>
<th>W</th>
<th>Name</th>
<th>Last Success</th>
<th>Last Failure</th>
<th>Last Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FRT</td>
<td>2 days 23 hr - #521</td>
<td>N/A</td>
<td>29 sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td>owms</td>
<td>9 days 14 hr - #19</td>
<td>1 mo 0 days - #11</td>
<td>58 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>owms-PR-builder</td>
<td>25 days - #5</td>
<td>1 mo 10 days - #4</td>
<td>58 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Norme-lui-run</td>
<td>8 hr 4 min - #310</td>
<td>3 days 8 hr - #307</td>
<td>1 hr 18 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-common</td>
<td>2 days 22 hr - #33</td>
<td>1 mo 29 days - #2</td>
<td>35 sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-common-PR-builder</td>
<td>19 days - #7</td>
<td>19 days - #6</td>
<td>1 hr 54 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-core</td>
<td>4 days 0 hr - #20</td>
<td>3 days 0 hr - #29</td>
<td>16 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-core-PR-builder</td>
<td>1 mo 10 days - #8</td>
<td>N/A</td>
<td>14 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-data-nightly</td>
<td>8 hr 25 min - #52</td>
<td>N/A</td>
<td>0.74 sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-data-PR-builder</td>
<td>1 mo 9 days - #94</td>
<td>1 mo 9 days - #53</td>
<td>1 hr 14 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-grid</td>
<td>19 days - #14</td>
<td>1 mo 25 days - #1</td>
<td>15 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>opm-qtd-PR-builder</td>
<td>25 days - #4</td>
<td>25 days - #3</td>
<td>1 hr 33 min</td>
</tr>
</tbody>
</table>

Build Queue
No builds in the queue.

Build Executor Status
1 Idle
2 Idle
Benchmarking

Open Porous Media Git

Open Porous Media Git
Open data
What about the apps?
Let it flow!
Visualize and analyse
Documentation and profiling

Fast and Free 3D Visualization of Reservoir Simulations

Fast
- Hazzle free
- Starts in an instant

Unique Features
- NNC visualization
- Cell Edge Coloring

Getting started
- It's easy, both on Linux and Windows
Homogenize
Command-line rocks!

Upscale simple statistics

cpchop is a command line utility for doing subsampling and property analysis of Eclipse grid files, typically generated in SEED or ReservoirStudio, but can be used on all corner point grids with box shape and vertical pillars.

The program picks (optionally random) subsamples from the model and analyzes these. There are a variety of different properties to analyze for each submodel, the most common being single phase permeability (flow based upscaling equivalent to the stand alone tool upscale_perm and bulk properties like porosity and ntg. Results from this kind of analysis can be outputted to a resultfile.

The program can also output the subsamples them selves into new stand alone corner point grids in grdecl format.

Usage

The program can currently only be run from a Linux command line. Follow these instructions for access to the binary files.

```
$ cpcchop gridfilename=cornerpointgrid.grdecl [option=value]
```

The gridfile must have a shoebox shape with vertical pillars.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>subsamples</td>
<td>number of subsamples</td>
<td>1</td>
</tr>
<tr>
<td>filebase</td>
<td>If supplied, grdecl-files for each subsample will be written to files named using this filebase; it may include directory names</td>
<td></td>
</tr>
<tr>
<td>resultfile</td>
<td>Name of a textfile to output table of results pr. subsample to</td>
<td></td>
</tr>
<tr>
<td>llen</td>
<td>Length in i-direction of sub sample, specified in number of cells(t)</td>
<td>All cells in i-direction</td>
</tr>
<tr>
<td>llen</td>
<td>Length in j-direction of sub sample, specified in number of cells(t)</td>
<td>All cells in j-direction</td>
</tr>
<tr>
<td>llen</td>
<td>Length in z-direction of sub sample, specified in the grids length unit (typically cm or m)</td>
<td>Full height</td>
</tr>
</tbody>
</table>
Fracturing, the new kid on the block
Don't forget the utilities
There’s never been a better time for good ideas