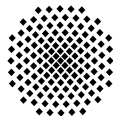


# DuMu<sup>x</sup>-Pub

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First DuMu<sup>x</sup> User Meeting, 11/12.6.2015, Stuttgart



# Motivation

- Coding of applications for a paper, thesis, ... in `dumux-devel`.
- **How to archive the code** such that
  - **you** can replicate the results later for paper revision, comparison, ...?
  - **others** can have a look at the code, replicate the results, ...?
- Best practice so far: record `dumux-devel` **svn revision number**.
- **Problems:**
  - **Error-prone:** local changes can be forgotten.
  - **Little use** for the community: `dumux-devel` is not public.
  - **Difficult** to see what code parts are really used: `dumux-devel` is too big (2,000 source files, 2,000,000 lines of C++ code w/o comments/blanks).
- **Goals:**
  - **Extract** only the relevant files.
  - Keep the applications **working**.
  - Allow **access** for everybody.



# The Subversion Repository

- A part `dumux-pub` of the repository DUMUX has been **created**.
- Just like the other parts, it is **addressed** by
  - `svn://svn.iws.uni-stuttgart.de/DUMUX/dumux-pub`
  - `svn+ssh://luftig/home/svn/DUMUX/dumux-pub`
- Offers **anonymous** read access.
- **Layout:** contains tables (subfolders) named `AuthorYearX`, where
  - `Author` is the **last name** of the first/corresponding author,
  - `Year` is the **year** of publication,
  - `X` is a running **character** to distinguish between several contributions.
- **Up to now**, 14 tables have been timbered:
  - `Baber2014a....`
  - `Shigorina2014a`
- **Idea: each pub table is a fully-working DUNE module.**



# Timbering a Table for the Pub

- A bash **script** `extractmodulepart.sh` is available in `dumux-devel/util/scripts`.
- **Usage:** `extractmodulepart.sh MODULE_DIR PATH_1 [PATH_2 ...]`
- **Extracts the subfolders** of `MODULE_DIR` indicated by `PATH_1 [PATH_2 ...]`.
- **And all headers** in `MODULE_DIR` that are required to build executables from the sources in `PATH_1 [PATH_2 ...]`.
- **Copies** the extracted files into a **freshly created DUNE module**, retaining the directory structure.
- **Updates/creates** all required files `configure.ac`, `Makefile.am` and `CMakeLists.txt`.
- **Result:** a fully-working DUNE module containing the subset of `MODULE_DIR` that is required to run the applications.
- **Dependencies** are listed in an automatically created `README` file.
- **Next step:** Commit to the `dumux-pub` repository.



# Come to the Pub!

- **Since 2015, every publication **must** be accompanied by a corresponding table in the pub:**
  - journal papers,
  - PhD theses,
  - Master and Bachelor theses.
- **Beneficial for**
  - **our group and the scientific community:** move one step further towards **transparency and reproducibility** of our computational results.
  - **you:** greatly facilitates the **assembly of your thesis** from your papers, supervised Bachelor/Master theses, ...



# Future Plans

- Enhance **usability** of the script `extractmodulepart.sh`.
- Generate script for downloading all **required DUNE modules**.
- Base upon **long-living Linux distributions**.
- Put each module on **Zenodo**.

