Part I

Modular Data Structures

Modular Data Structures (I)

Feature Primitive for data structures implementations with intention of no runtime overhead.

Implementation techniques

- language support (C++ template, if constexpr, #ifdef)
- AOP and FOP

Variability modeling

- kconfig
- feature models

Modular Data Structures (II)

Feature Primitive for data structures implementations with intention of no runtime overhead.

Next steps

- Implementation technique secondary, focus more on modeling (incl. constraints)

Cross-reference to other DFG SPP project

- model pruning with constraints for multi-objective optimization problem
- database system decomposition

Part II

Collaboration and Sharing

Collaboration and Sharing (I)

Best practice for publication of code artifacts and sharing of benchmarks.

Benefits & Drawbacks of Licenses

- GNU GPL, MIT, and others
- legal issues of code ownership

Micro-Benchmark

- tooling (Google Benchmark), godbolt.org
- compiler optimization impacts

In-depth Project Presentation and Internals

- Mosaic, STAN, CARBON, TSP for NVM, MxKernel (Scheduling)
- GPU and Bottlenecks, Threading and Load Balancing, Sync/ Locking/Latching

Collaboration and Sharing (II)

Best practice for publication of code artifacts and sharing of benchmarks.

Next Steps

- Development of a benchmark

Cross-Reference to Other DFG SPP Projects

- All