

European Spallation Source

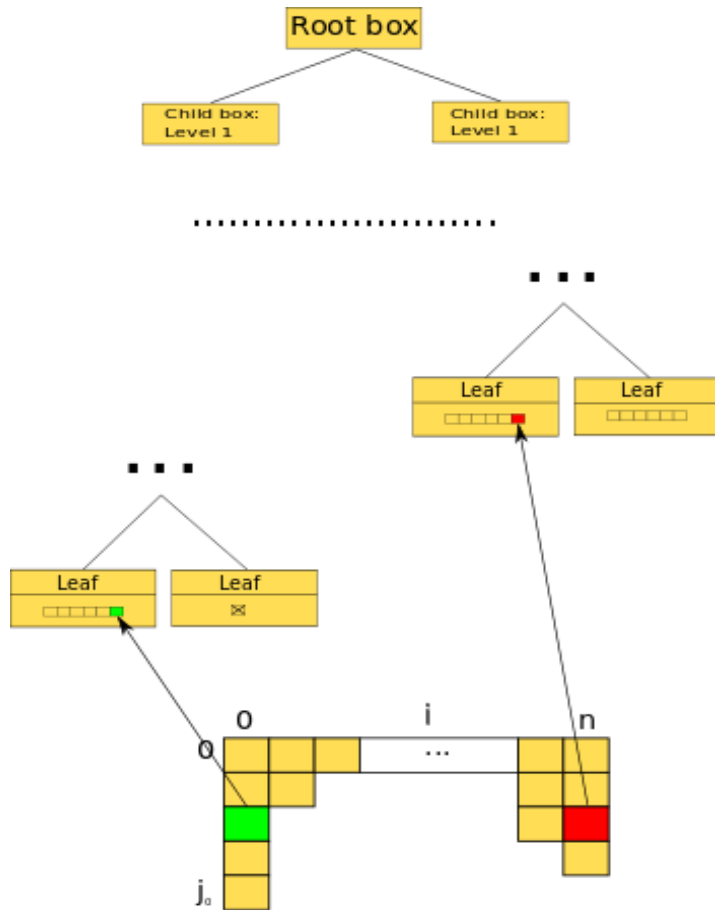
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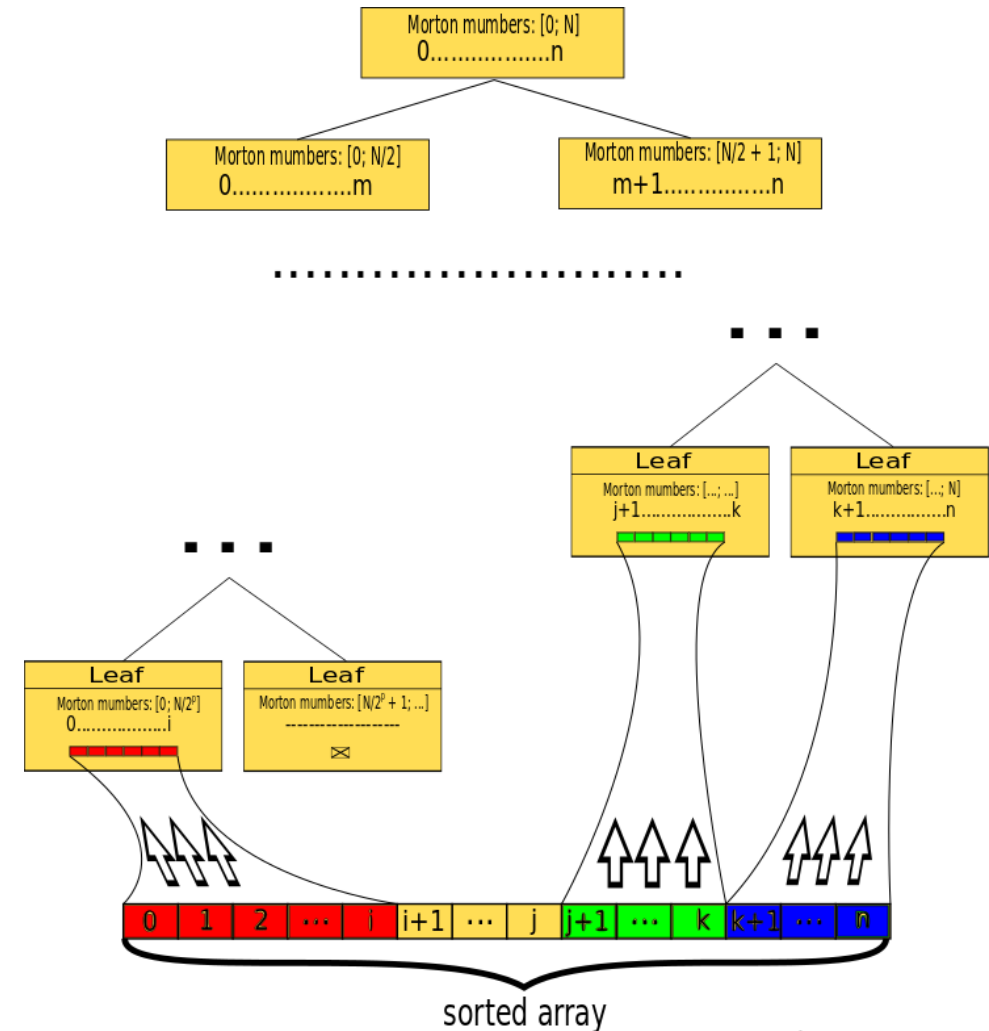
2 of April 2019

The new algorithm for ConvertToMD

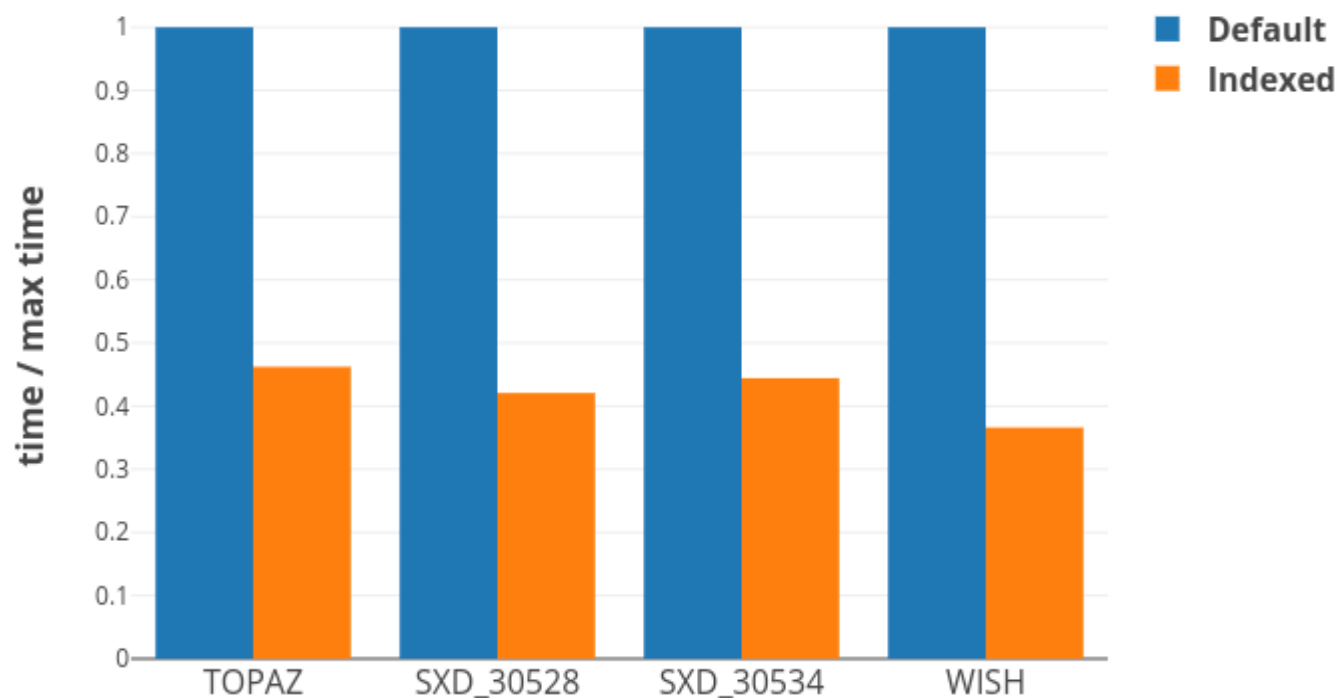


The old implementation issues:

- “Very” random memory access.
- Locking boxes in parallel environment.



'ConvertToMD' comparison the performance: 'Default' vs. 'Indexed'



- Additional parameter *ConvertToMD* algorithm: *ConverterType* = {'Default', 'Indexed'}.

Notes:

1. *SplitInto* should be the same for all dimensions and only powers of 2 should be used.
2. Negligible accuracy due to conversion to the Morton index.

!!!NO BENCHMARKS FOR 4D CASES!!!

Design document:

<https://github.com/mantidproject/documents/pull/66>

Prototype:

<https://github.com/DMSC-Instrument-Data/MDSpaceFillingPrototype>