

A Scalable DCEL implementation

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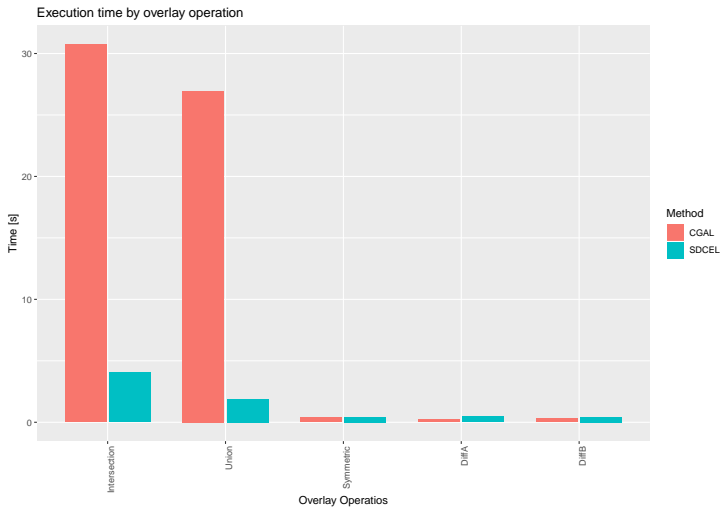
June 26, 2020

Overlay operations

CGAL implementation

- ▶ Extend the CGAL implementation to evaluate the overlay operators.
- ▶ Run validations with Phili dataset.
- ▶ Run experiments with CA dataset:
 - ▶ Cluster: 12 nodes, 8 cores each.
 - ▶ Average of 10 runs.

Experiment results



Experiment results

Implementation	Operator	Time[s]
CGAL	Intersection	30.71
SDCEL	Intersection	4.05
CGAL	Union	26.92
SDCEL	Union	1.90
CGAL	Symmetric	0.38
SDCEL	Symmetric	0.42
CGAL	DiffA	0.22
SDCEL	DiffA	0.45
CGAL	DiffB	0.30
SDCEL	DiffB	0.40

What's next

- ▶ Run additional tests on CA results.
- ▶ Fix performance issues in SDCEL Symmetric operators.
- ▶ Still working on load balance in the cluster.