

RIDIR Report

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Working on Edge Partitioner

Re-checking DCEL local construction

- ▶ Tuning the pruning of duplicates half edges.
- ▶ Removing the use of look-up lists.
- ▶ Worked face assignment base on polygon id.
- ▶ Dealing with the issue when a cell does not cover any edge.

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- ▶ Tuning the pruning of duplicates half edges.
- ▶ Removing the use of look-up lists.
- ▶ Improved performance:

Dataset	Polygons	Edges	Diff
CA_districts_2000	7028	999763	from 5.6s to 2.4s
CA_districts_2010	8047	2901758	from 21.5s to 5.4s

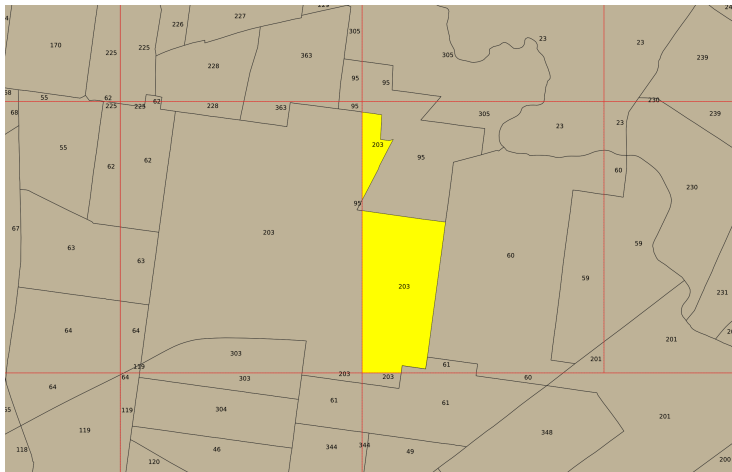
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- ▶ Worked face assignment base on polygon id.
 - ▶ It does not work because a polygon can have multiples faces in a partition.
 - ▶ Tried to include an additional field or some feature from the polygon to differentiate but there was not gain in performance.

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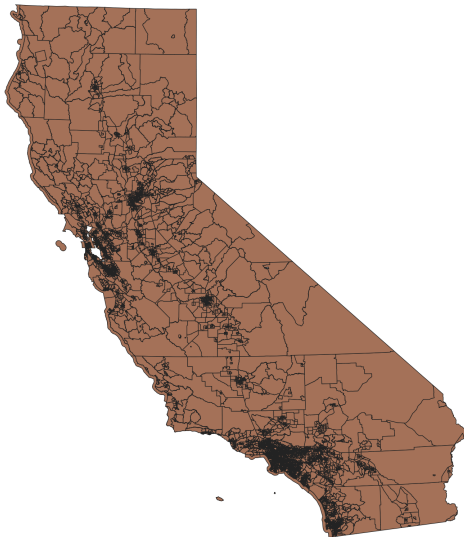
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- ▶ Dealing with the issue when a cell does not cover any edge.
- ▶ Working on an alternative including the polygon layer to mark those cells which are completely covered by a polygon.

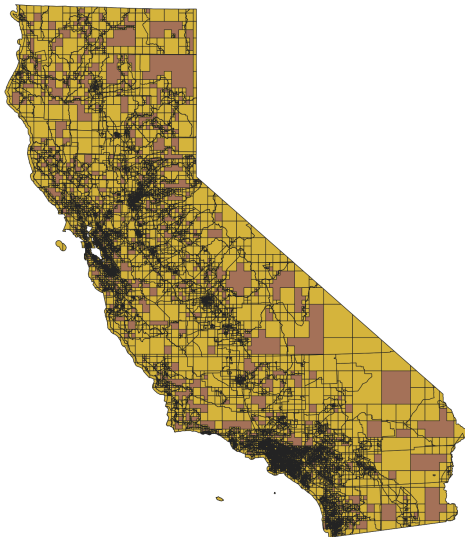
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What is next?

- ▶ Fix issue with cells and edges.
- ▶ Re-check improvement versus previous implementation.
- ▶ Integrate the code.