

Components

Manifold or SCG(Simplital Complex Graph)

A **manifold** is a topological space that locally resembles Euclidean space near each point. Naively, one can think of a n -dimensional manifold as a n -dimensional polyhedron in the limit of infinite subdivision.

$$\begin{aligned} & n\text{-dim Manifold } M \\ & \equiv \{c^n(P) \times g(P) \mid \forall P \in M\} \\ & \equiv \{\text{neighbors of } c(P) \mid \forall c(P) \in \text{SCG}\} \end{aligned}$$

- `simplital_subdivide`:
 - perform simplital subdivision on the given manifold or simplital complex graph.

- return the isomorphic complex in form of graph.
- `precision_goal`:
- TODO: triangulation implication
 - triangulation is an specific algorithm of `simplital_subdivision`
 - enmeshment
 - if there is even number of vertex in the SCG, then
- TODO:
- `nvertex`
- `nedge`

Complex Graph

Grid Complex Graph

Vertex

Grid Vertex

Edge

Grid Edge