Delaunay Triangulation

RIC Analysis

- Preconditions

05-K-03

Junhui DENG

deng@tsinghua.edu.cn

Independence Of Insertion Order

❖ Given an S in general position

- there is a **unique** DT(S);
- the structure of DT(S)

  is **independent** of

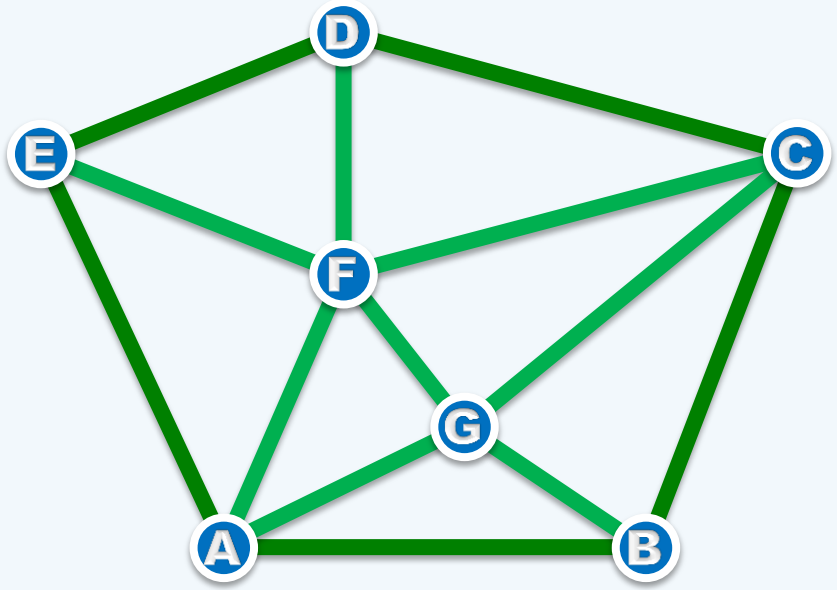
  the insertion order

  of the sites so far;
- any of the existing sites

  is **equally likely**

  to have been the last one

  to be added to the structure



Number of Edge Changes

- Claim:

  the expected number of edge changes

  with each insertion

  is $O(1)$

- Let p be

  the last of the sites

  that have been added currently

- How many edges

  have been flipped

  due to

  the insertion of p?