

Delaunay Triangulation

Proximity Graph

- Relative Neighborhood Graph

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Definition

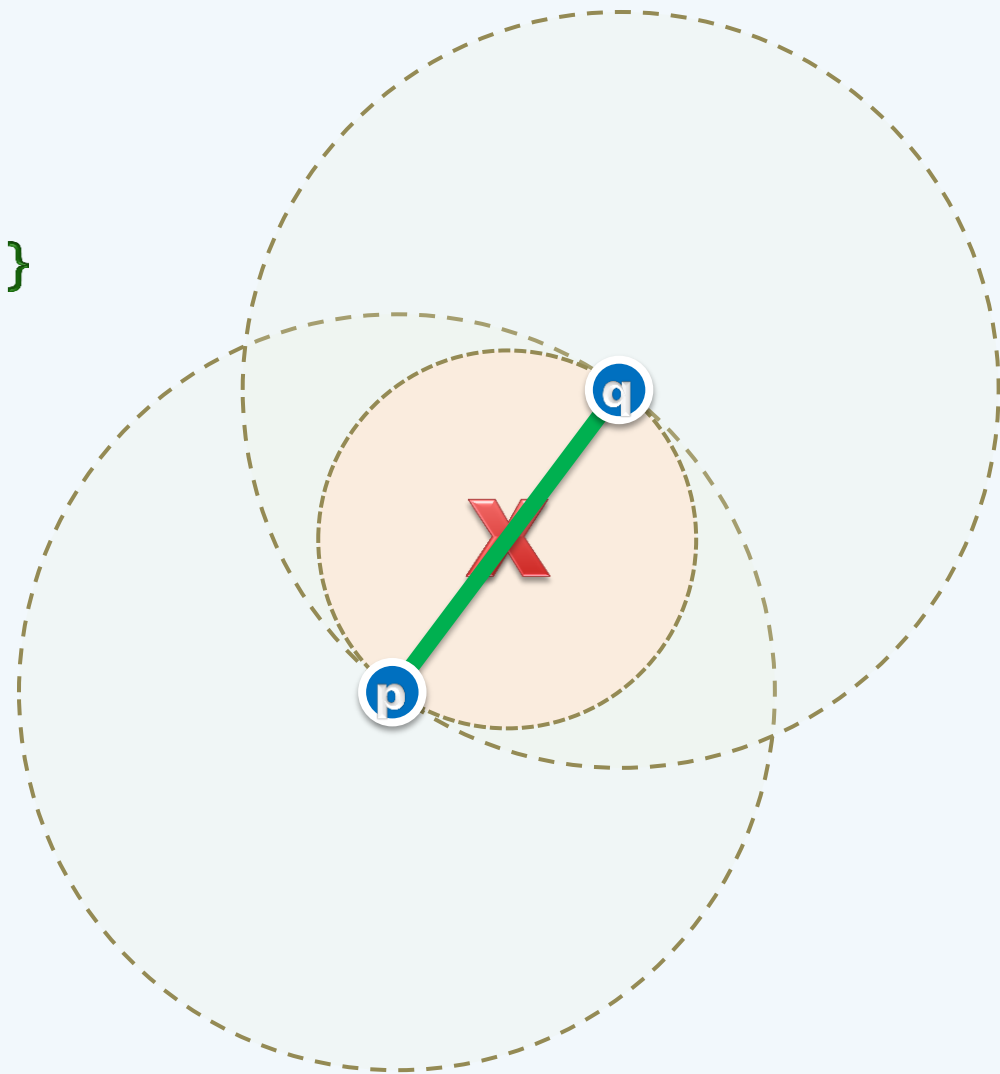
❖ For any $p, q \in S$, $pq \in \text{RNG}(S)$ iff

$$|pq| = \min\{ \max(|pr|, |rq|) \mid r \in S \}$$

❖ pq belongs to $\text{RNG}(S)$ iff

$\text{lune}(p, q)$ is empty

❖ $\text{RNG}(S) \subseteq \text{GG}(S) \subseteq \text{DT}(S)$



Construction

❖ [Supowit-1983]

RNG(S) can be constructed

in $\mathcal{O}(n \log n)$ time

❖ [Jaromczyk-1987 & Lingas 1994]

RNG(S) can be constructed from DT(S)

in $\mathcal{O}(n)$ time

