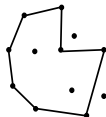## Enumerating *At Most k-Out* Polygons

- An *at most k-out polygon* P of a point set S is a simple plygn

  - each vertex of P is a point of S.

  - there are at most k points outside P.

- **Problem:** Given a set S and an integer $k \geq 0$, enumerate all *at most k-out* plygns of the set S.

- Give an enumeration algorithm using reverse search technique.

- Build a tree structure s.t. each node corresponds to an at most k-out polygon.

- The enumeration algorithm enumerates all the polygons in $O(n^3 \log n)$-delay and $O(n^2)$-space.