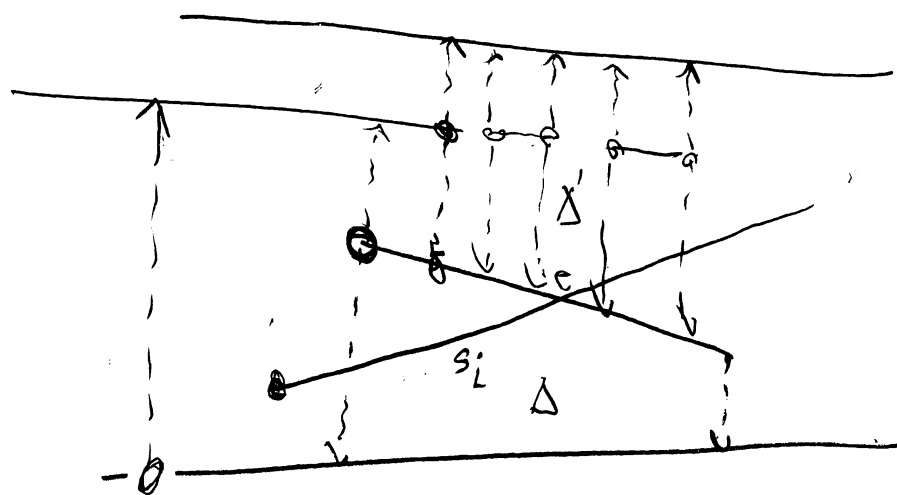


CG
9/18/08

Line Intersection using Trap Decomp

Idea: Use random incremental

The only change is step 3)b) stitching



Way to find Δ' given s_i & Δ ?

Solution:

1) View Trap Decomp as a PSLG
 Δ is no longer 4 sided!

2) To find e & thus Δ'

We try, from left-to-right, all edges of $\text{Top}(\Delta)$

Paying for finding e.

Backwards analysis

Let Δ be a trap. Question?

$\text{Char}(S) = \{ S \mid \text{removing } S \text{ charges } \Delta \}$

Claim $|\text{Char}(S)| \leq 6$

Thm Random Incremental for Line Intersection
is $O(n \log n + K)$ expected $K = \# \text{intersections}$