Soukup's Algorithm

- Soukup, “Fast maze router,” DAC-78.
- Combined breadth-first and depth-first search.
  - Depth-first (line) search is first directed toward target $T$ until an obstacle or $T$ is reached.
  - Breadth-first (Lee-type) search is used to “bubble” around an obstacle if an obstacle is reached.
- Time and space complexities: $O(MN)$, but 10--50 times faster than Lee's algorithm.
- Find a path between $S$ and $T$, but may not be the shortest!

Features of Line-Search Algorithms

- Time and space complexities: $O(L)$, where $L$ is the # of line segments generated.
Hightower’s Algorithm

- A single escape point on each line segment.
- If a line parallels to the blocked cells, the escape point is placed just past the endpoint of the segment.
- Cannot guarantee to find a path between $S$ and $T$, if exists!