RRT:

Steven M. LaValle notes some ”nice properties” [[1]](http://www.techunited.nl/wiki/index.php?title=Path_planning:_RRT_-_Literature#7._Literature). In general the most important advantages are:

1. A tree rapidly explores the whole area, instead of ‘staying’ in the neighborhood of the start node.
2. The RRT algorithm is quite simple to program; so this quality leads to a fast analysis to find a path.
3. A lot of extra options can be added to the basic algorithm.
4. The RRT algorithm can be incorporated into a lot of planning systems.

There are also a few disadvantages for a basic RRT algorithm:

1. The algorithm is not deterministic. A found path is not the same the next time a path has to be found on the same start node. And because of this characteristic, it is possible that some of the found paths are not the paths a human being would have chosen.
2. If there are a lot of obstacles in the state space, the chance of finding a point that is not lying in an obstacle and is able to connect to the tree is very small.
3. A narrow passage is also difficult to pass.
4. The found path is sharp-edged, which can’t be driven easily.