|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| RRT | pathing | Re-path | Avg time | abandon |
| 4 | 163 | 34 | 0.0098 | 71 |
| 8 | 509 | 144 | 0.000787 | 303 |
| 16 | 2590 | 523 | 0.000179 | 2145 |
| 32 | 38380 | 1736 | 0.000109 | 37250 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A\* | pathing | Re-path | Avg time | abandon |
| 4 | 203 | 28 | 0.000485 | 75 |
| 8 | 595 | 171 | 0.000247 | 339 |
| 16 | 1893 | 612 | 0.00017 | 1255 |
| 32 | 6693 | 2178 | 0.000135 | 4879 |
| 64 | 22909 | 6784 | 0.000114 | 18762 |
| 128 | 52347 | 18845 | 9.983E-05 | 46001 |

\*abandon: number of times the NPC give up on its current path because some other NPCs are in the way.

The RRT can effectively support up to 32 NPCs, after running the game for more than one minute, there is a good chance that some NPCs would stop moving because they were stuck in where they are and couldn’t not find a new path effectively.

The A\* can effectively support up to 128 NPCs and no one will be stuck no matter what. So, I would say A\* is probably the better algorithm for this game. According to its performance for 128 NPCs, I believe it can even support 256 or more NPCs if the terrain is big enough.