

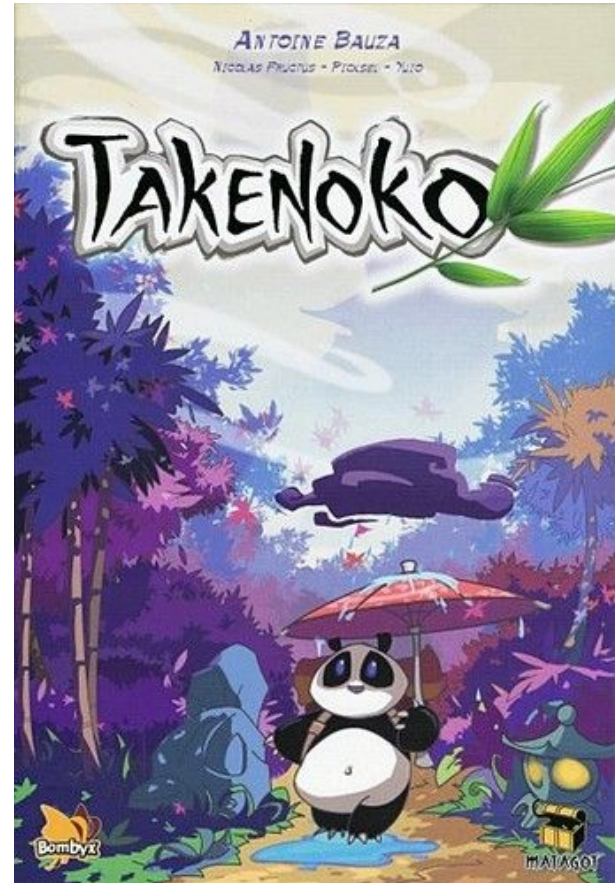
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The Game

- Placing tiles
- Irrigating
- Growing bamboos
- Eating bamboos
- Completing objectives
 - Gardener
 - Panda
 - Patterns
- Winning



Reduced game engine

- Only one player
- Focus on the panda objectives
- Preset game boards
- Sparse, non-growing bamboo shoots
- The game ends when a specified number of points is reached





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- A hexagonal grid map with a central blue hexagon containing a panda and a koala. The grid is composed of green, yellow, and pink hexagons. Red lines connect the central blue hexagon to several other hexagons, forming a path. Numbers 3, 4, 5, and 6 are placed on some of the hexagons.



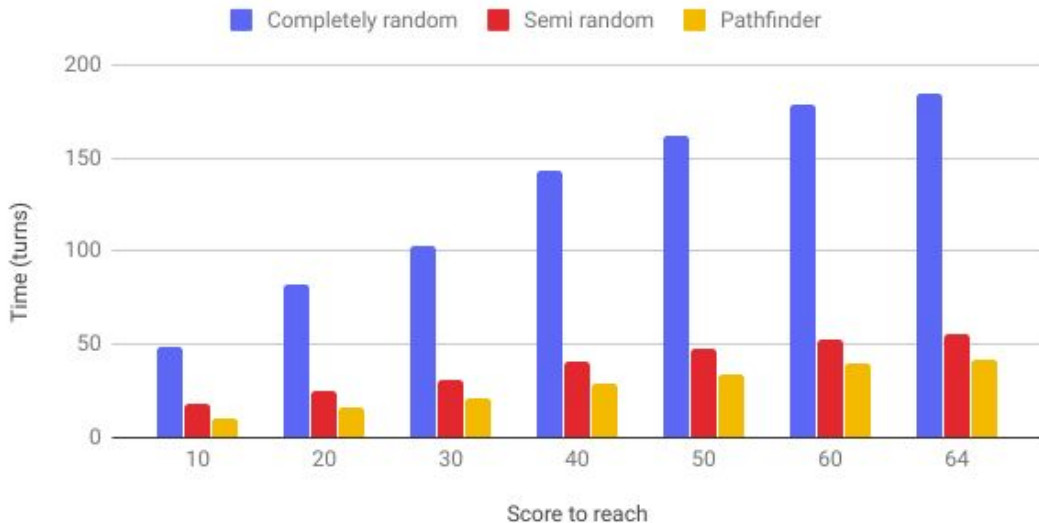
Protocol

- Control bot : a random bot
- Moves the panda anywhere
- A third semi-random experimental bot
 - Moves the panda to a randomly selected bamboo-containing tile if he can
 - Anywhere otherwise
- Run 1000 games on the same 1000 boards
- Compare the time they take to finish
 - At least
 - On average
 - At most



Results (always 1 objective in hand)

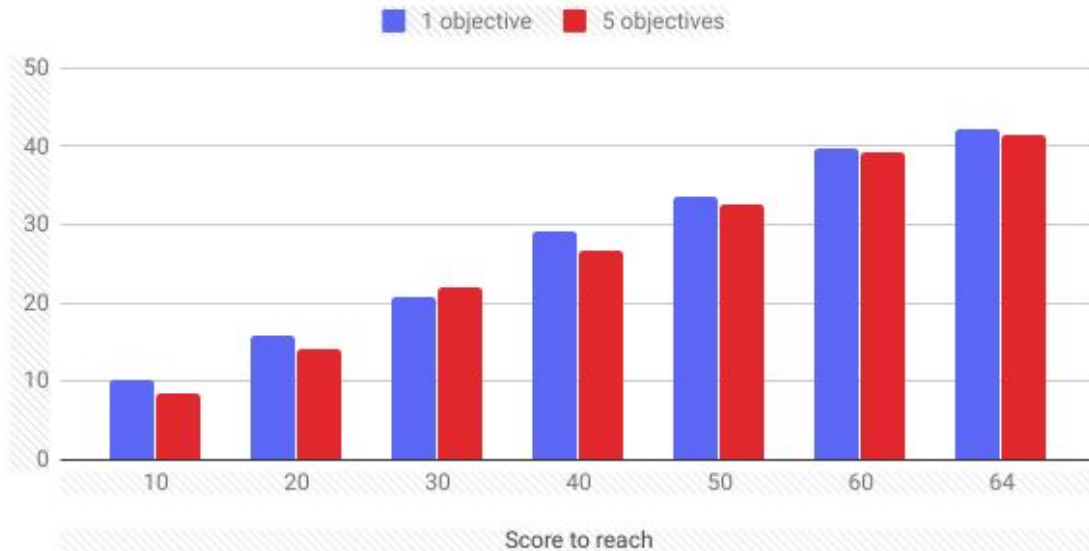
Average time it takes to finish with one objective in hand on a set of boards where only two tiles of each color have bamboo





Results

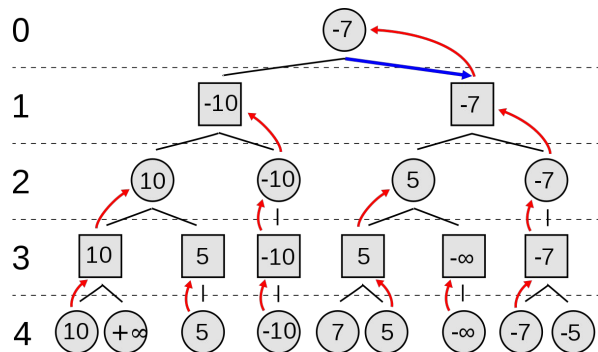
Pathfinder : 1 objective in hand vs 5 objectives performance on the same game boards





Minimax bot

- The tiles no longer have bamboos by default
- The player moves the gardener to make it grow
- Extends the previous bot
- Uses the minimax algorithm to choose where to move the gardener and where to move the panda



Conclusion

