

Title: Grid-based Online Multiplayer Strategy Game

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Abstract: Playing a massively multi-player on-line real-time strategy game is connected with expectation of playing with other players close to your position in the game. Some games of this kind have a very long life cycle where the progress of each player is persistent. A match can take months, even years to finish. However, every match is very dependent on the amount of participants which is not always ideal. Different seasons of the year can cause massive drops in the amount of players. There have already been attempts to incorporate an artificial intelligence to these matches, but the goal was to provide a win condition instead of fighting a decreasing player base. That is why we have started developing a framework which includes the basic mechanics of the game and allows customization of basic game elements such as units, resources, buildings or entire nations. Part of the framework is an artificial intelligence which is capable of playing games created using the framework along with players. The problem was to find a proper behaviour for the artificial intelligence that has a balance between computational complexity and effectivity. A positive outcome of this experiment will influence the critical phases of these types of games by adding entities controlled by mentioned artificial intelligence until the amount of active players returns to acceptable level. This might also increase the chance of success of new game servers that use this framework.

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