large and complex domain and a very big state model. The CBR application helps reduce this complexity by focusing the planning on smaller domain of the game. Basically the CBR reduces the overall goal of the play (wining the game) to smaller more concrete goals suitable to the particular state of the game, thus reducing the need for global planning strategies and complex planning domain.

Furthermore this symbiosis of technologies gives way for more precise and finely tuned strategies which can be difficult to include into global plan for the whole game. One simple example for the Monopoly game would be this: Sometimes it's better to stay in jail because rolling double increases the probability of landing on some field (two, four, six, eight, ten or twelve steps from the jail) that can be of great importance to the rest of the game. These and similar small local strategies can be easily recognized by similar cases in the CBR database.

In other words the system is flexible enough so that new strategies can be incorporated easily missing strategies can be also recognized by the distance metrics as well as wrong assumptions in the strategies can be easily recognized.

One other important property of the system is that is highly configurable. The game its self can be diversely different depending on the configuration of the board. Even though the platform is restricted to Monopoly type of games, changing the layout and values of the fields effectively brings completely different properties of the game. In addition the CBR database represents the entire experience of the AI Player. It can be filled with rich set of strategies or even configured with different flavors of difficulties of play, this of course coupled with the domain of the planner which can differ from a case to a case as well.

8. Future Work

Further exploration of this technology would go towards complete implementation of an AI aware agent for monopoly. Initial results from the local cases with more specific strategies show CBR as a capable tool for representing expertise in playing the game. Completing the more general strategies and coupling them with the planning domain will give precise results on the benefits from this architecture.

There is also need for exploring the planning of strategies of opponents. This task is to some extent different because we cannot always expect the opponent to select the best move we think. In the Tic-tac-toe example all possible moves of the opponent were taken into consideration, if we used the same planner for the opponent only tie games would result from the game tree. In other words mistakes of the players also need to be considered.

The CBR Platform brings other functionalities well worth of exploring as well. The revision stage of the JColibri2 platform is basically capable of fine tuning strategies or even developing new strategies for the games. A well written underlying AI planning model with a capable feedback of the game tree evaluation back to the CBR revision capability can be an interesting concept in automatic experience acquisition for the AI model.

There are also many other fields were combined CBR and planning approach can be incorporated into a problem solution. This combination is analogous in a big extent to a human way of reasoning. People in addition to logic of reasoning in situations with lack of information rely to planning strategies and prior experience, exactly the intuition behind CBR – AI Planning architecture.

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