For this review I read “SCAIL: An integrated Starcraft AI System” by Jay Young, Fran Smith, Christopher Atkinson, Ken Poyner and Tom Chothia
http://geneura.ugr.es/cig2012/papers/paper103.pdf

The paper is describing an AI that was made to handle all aspects of playing a game of the original Starcraft, the classic real time strategy game by Blizzard. The AI focuses on the major issues of macro-management, attack timings, and micro-management.

Macro-management is the high level decisions around how to allocate in game resources between increasing resource collection, research, and building army. To accomplish this the agent uses a goal-driven task architecture where a high level goal is set, and then the next task needed to accomplish the goal is executed, looping until the goal is reached. The agent also scouts the opponent and maintains a belief state of the opponent’s units and structures in order to narrow down which builds the opponent is using and set the optimal build to counter as the goal.

Attack timing is another important aspect to starcraft, and revolves around scouting out the opponent in order to determine if an attack at the current point in time will benefit or hurt the agent’s chances of winning. The belief state is used here to determine if the agent’s army is likely to defeat the opponent’s army. The agent also divides the map into discrete “places” in order to keep track of where the opponent’s units are likely to be, with scouts constantly checking around different “places” on the map.

Finally, the Agent achieves micro management by having units transition between states based on what their goal is, whether it be scouting, attacking, retreating, etc. The units make different decisions based on unit type and based on the numbers and types of nearby allied and enemy units.