Deep Blue Summary

The paper 'Deep Blue' by Campbell, Joseph Hoane & Hsu describes the deep blue system, a chess machine developed by IBM Watson. The paper also gives some of the rationale that went into the design decisions behind Deep Blue. The goal of this project was to build a world-class chess machine.

There were many factors that contributed to Deep Blue's success. The large searching capability, non-uniform search, and complex evaluation function were all important parts of the system. Other factors such as endgame databases, the extended book, and evaluation function tuning also played am important role. In addition, the team invited consulted Joel Benjamin, whom defeated a previous generation of Deep Blue.

Over time the team has seen a great improvement in results. The earlier attempts in building a chess machine was to develop ChipTest and Deep Thought at Carnegie Mellon University in the 1980s. In 1988, Deep Thought was the first chess machine to beat a Grandmaster in tournament play. In the next few years, Deep thought 2 was developed as a prototype for Deep Blue, and it won the 1991 and 1994 ACM Computer Chess Championships as well as defeating the Danish national team. In 1996, Deep Blue 1 challenged the chess champion Garry Kasparov, but got defeated by a score of 2-4. The year after, in a rematch, Deep Blue 2 defeated the Garry by 3.5-2.5, and was awarded the Dredkin prize.