

About MACA

The Massachusetts Chess Association is an educational non-profit organization whose purpose is to promote chess in Massachusetts and represent the interest of chess players within the state to the governing body of chess in the United States, **The United States Chess Federation (USCF)**.

As part of its role as a state organization, MACA has programs in place to support the existing chess community as well as promote chess among schools and the general public. Highlights of these programs are:



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Massachusetts Game/60 Championship
Greater Boston Open
Danvers 30/30 (William J. Comeau Memorial)
Pillsbury Memorial



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Make checks payable to MACA and mail to:

Gus Gosselin, PO Box 1255, Melrose, MA 02176
(781) 397-0919, GGosse1600@aol.com

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EDITOR

Mark C. Donlan
PO Box 1201
Harwich, MA 02645
(508) 432-7647

Entire Staff: ChessHorizons@MassChess.org

GAMES EDITOR

Jorge Sammour-Hasbun
Andrew Bakker

EDITORIAL ASSISTANTS

Stacy Angle
Richard Murphy

PHOTOGRAPHY EDITOR

Tony "I Only Look at the Pictures" Cortizas Jr.
(617) 491-1398

ADVERTISING MANAGER

Vacant

PRINTER

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MACA

Massachusetts Chess Association
www.masschess.org

OFFICERS

PRESIDENT
Harvey Reed
1 Concord Street
Natick, MA 01760
(508) 653-4608

VICE PRESIDENT
Steven Frymer
64 Asbury St.
Lexington, MA 02421-6521
(781) 862-3799
AFrymer@aol.com

TREASURER
Bob Messenger
4 Hamlett Dr. Apt. 12
Nashua, NH 03062
(603) 891-2484

CLERK
Mark Kaprielian
MKaprielian@rcn.com

MACA MEMBERSHIP
SECRETARY
Gus Gosselin
PO Box 1255
Melrose, MA 02176
(781) 397-0919
GGosse1600@aol.com

COORDINATORS

TOURNAMENT: Steve Frymer
CLUB: Robert King
COMEAU FUND & LIVING
MEMORIAL: Gus Gosselin
DATA PROCESSOR: Mark
Kaprielian
PRISON: Steven Frymer
PROMOTION/EDUCATION:
Stephen Dann, Acting
PUBLICATION: Robert King
VOLUNTEER: Harvey Reed
SCHOLASTIC: Anthony Gavelis

The Silicon Saga

Mark Donlan

Kramnik vs. Deep Fritz

My proudest moment playing against a chess computer came when Fritz 5 wrongly suggested I take a move back. It's true I was about to lose material, but I had seen I could draw the game with an active rook against his exposed king in the endgame. It was my best result against the program. Nowadays I use Fritz 7, but only for analysis. I hardly ever play against it.

If I want a quick game I can log on to the Fritz Internet server, where I've played almost 700 games to date, and I actually stand a good chance of winning. The computer is just too good to play against. Witness World Champion Vladimir Kramnik's drawn 8-game match against Deep Fritz the multiprocessor version of Fritz 7.

The pre-match hype was incredible. Fritz was described as "the most lethal chess computer ever created" by Nigel Farndale in the Daily Telegraph. Author Monty Newborn, whose book *Deep Blue: An Artificial Intelligence Milestone* was published in October, said that today's computer programs "are playing at least as good as Deep Blue", the IBM supercomputer that defeated Kasparov in 1997.

Kramnik himself asserted that Fritz was stronger than Deep Blue and that it was "the strongest chess software ever written." He added "there are not many humans left who would have a chance in such a match."

Frederic Friedel, the creator of ChessBase which distributes Fritz, predicted "that within five years Fritz will be able to beat any human in any type of match. His speed and sophistication are going to continue increasing exponentially."

For all that, Nell Boyce, writing at usnews.com, wasn't buying any of it. He surmised "while the power of computer chips has marched forward over the past five years, that doesn't necessarily mean these new cyber-champs would outperform Deep Blue...Fritz and Junior exist as off-the-shelf software for PCs, which anyone can buy to play at home. The deep versions run on multiple Pentium processors—essentially, a battery of PCs—but they'll consider only around 2.5 million positions per second."

The use of Fritz as an analyst and training partner has certainly been accepted by all the top players, Kasparov is said to call it "my distinguished friend". Judit Polgar affectionately refers to it as "Fritzzy". And Viswanathan Anand has quipped it is "like every other grandmaster except he doesn't join you in the bar after a game."

Kramnik had a leg up in comparison with Kasparov vs. Deep Blue. For he was given a copy of the playing software prior to the match and no modifications could be made except to the opening book and hash table size. Therefore he could prepare for his opponent and, at first, it seemed to pay off.

Things began well for Kramnik when he won games two and three, putting him ahead 3-1 at the halfway point. It was inconceivable that the match result would be anything other than a win for Kramnik.

Yet Fritz came back in game five when, according to Paul Hoffman, "Kramnik made the worst blunder of his career and arguably the biggest error ever made by a world chess champion. He lost a knight in a one-move combination on the thirty-fourth move and resigned immediately."

After the game Kramnik told spectators he would "go back to the hotel and reconsider our approach." Yet his approach to the sixth game was disastrous. Instead of playing for a small advantage as he had been doing, Kramnik played a dazzling piece sacrifice

Deep Fritz - Kramnik, V (2807)

[C67] Brains in Bahrain, Manama UAE (1), 04.10.2002

1.e4 e5 2.Nf3 Nc6 3.Bb5 Nf6 4.0-0 Nxe4 5.d4 Nd6 6.Bxc6 dxc6 7.dxe5 Nf5 8.Qxd8+ Kxd8 9.Nc3 h6 10.b3 Ke8 11.Bb2 Be7 12.Rad1 a5 13.a4 h5 14.Ne2 Be6 15.c4 Rd8 16.h3 b6 17.Nfd4 Nxd4 18.Nxd4 c5 19.Nxe6 fxe6 20.Rxd8+ Kxd8 21.Bc1 Kc8 22.Rd1 Rd8 23.Rxd8+ Kxd8 24.g4 g6 25.h4 hxg4 26.Bg5 Bxg5 27.hxg5 Ke8 28.Kg2 ½-½

Kramnik, V (2807) - Deep Fritz

[D27] Brains in Bahrain, Manama UAE (2), 06.10.2002

1.d4 d5 2.c4 dxc4 3.Nf3 Nf6 4.e3 e6 5.Bxc4 c5 6.0-0 a6 7.dxc5 Qxd1 8.Rxd1 Bxc5 9.Kf1 b5 10.Be2 Bb7 11.Nbd2 Nbd7 12.Nb3 Bf8 13.a4 b4 14.Nfd2 Bd5 15.f3 Bd6 16.g3 e5 17.e4 Be6 18.Nc4 Bc7 19.Be3 a5 20.Nc5 Nxc5 21.Bxc5 Nd7 22.Nd6+ Kf8 23.Bf2 Bxd6 24.Rxd6 Ke7 25.Rad1 Rhc8 26.Bb5 Nc5 27.Bc6 Bc4+ 28.Ke1 Nd3+ 29.R1xd3

Bxd3 30.Bc5 Bc4 31.Rd4+ Kf6 32.Rxc4 Rxc6 33.Be7+ Kxe7 34.Rxc6 Kd7 35.Rc5 f6 36.Kd2 Kd6 37.Rd5+ Kc6 38.Kd3 g6 39.Kc4 g5 40.h3 h6 41.h4 gxh4 42.gxh4 Ra7 43.h5 Ra8 44.Rc5+ Kb6 45.Rb5+ Kc6 46.Rd5 Kc7 47.Kb5 b3 48.Rd3 Ra7 49.Rxb3 Rb7+ 50.Kc4 Ra7 51.Rb5 Ra8 52.Kd5 Ra6 53.Rc5+ Kd7 54.b3 Rd6+ 55.Kc4 Rd4+ 56.Kc3 Rd1 57.Rd5+ 1-0

Deep Fritz - Kramnik, V (2807)

[C45] Brains in Bahrain, Manama UAE (3), 08.10.2002

1.e4 e5 2.Nf3 Nc6 3.d4 exd4 4.Nxd4 Bc5 5.Nxc6 Qf6 6.Qd2 dxc6 7.Nc3 Ne7 8.Qf4 Be6 9.Qxf6 gxf6 10.Na4 Bb4+ 11.c3 Bd6 12.Be3 b6 13.f4 0-0-0 14.Kf2 c5 15.c4 Nc6 16.Nc3 f5 17.e5 Bf8 18.b3 Nb4 19.a3 Nc2 20.Rc1 Nxe3 21.Kxe3 Bg7 22.Nd5 c6 23.Nf6 Bxf6 24.exf6 Rhe8 25.Kf3 Rd2 26.h3 Bd7 27.g3 Re6 28.Rb1 Rxf6 29.Be2 Re6 30.Rhe1 Kc7 31.Bf1 b5 32.Rec1 Kb6 33.b4 cxb4 34.axb4 Re4 35.Rd1 Rxd1 36.Rxd1 Be6 37.Bd3 Rd4 38.Be2 Rxd1 39.c5+ Kb7 40.Bxd1 a5 41.bxa5 Ka6

on his 19th move, after having a 42-minute think at move seventeen. The world champion said he had been unable to resist the beauty of the sacrifice as it “had the potential to be the best game I have ever played in my life.”

As noted on ChessBase.com, “this is how Grandmasters often lose to computers. They get great attacking positions that [are] just too complex to play against a program like Fritz that is seeing three million positions per second and can defend perfectly. You only need to miss one key move to go down in flames.”

And that he did, resigning once again on the 34th move. The key defensive variation Kramnik missed was 27.Qe6+ Nf6 28.f4 Bh4! In the final position, with fifteen minutes left on his clock, Kramnik saw that if he took the bishop Fritz was offering that Fritz gets a new queen. But, as reported by Mig Greengard, it may have been a draw after all.

Mig wrote, “Black will have a queen, knight, and passed b-pawn versus two rooks. But the black king is without shelter and the white rooks run amok...So it is a very real possibility that Kramnik resigned in a position he could have drawn.” And it does seem to be the case as even endgame authority Karsten Mueller, in an E-book freely distributed at ChessCafe.com, finds the position drawn.

With the match tied, Kramnik took two short draws in the final games, and pocketed \$800,000 for his efforts. It’s been said that the first half of the match would “be remembered for its early demonstrations of anti-computer chess by Kramnik” and the second half for the “display of excellent anti-human chess by Fritz.”

So have commercially available programs attained the Holy Grail of playing on equal par with World Champions? It would appear so. It will be interesting to see how well Kasparov fares in his January match against the Deep Junior playing-program. I expect a

Kasparov victory rather than a repeat of the Deep Blue scenario.

Kasparov vs. Deep Blue

Speaking of Deep Blue, Princeton University Press has just published *Behind Deep Blue: Building the Computer that Defeated the World Chess Champion* by Feng-hsiung Hsu. Hsu is the founding father of the Deep Blue project. He began it in 1985 as a graduate student in the Computer Science Department of Carnegie Mellon University.

From 1989 to 1997 he worked as the system architect and chip designer for the Deep Blue Chess machine at IBM’s T. J. Watson Research Center. He left IBM in 1999 and is now a research scientist at the Western Research Lab of Compaq Computer, Inc.

Behind Deep Blue reveals the inside story of how a modest student project eventually produced a multi-million-dollar supercomputer. From the development of the scientific ideas and chip design, through the many technical setbacks, the rivalries, and the egotistical posturing in the race to develop the ultimate chess machine.

In many ways it is more interesting for its stories about the human side of the equation rather than its technical aspects. One doesn’t need to be a chess player or computer scientist to enjoy the book, but it does help to have some understanding of both disciplines.

In May 1997, Deep Blue shockingly defeated reigning world champion Kasparov as millions of people worldwide followed the match. Kasparov immediately began protesting the match conditions and intimated that only human intervention could have allowed Deep Blue to make its decisive, “non-computer-like” moves.

Hsu “describes the heightening tension in this war of brains and nerves.” The book is written not just as

<p>42.Ke3 Kxa5 43.Kd4 b4 44.g4 fxg4 45.hxg4 b3 46.Kc3 Ka4 47.Kb2 f6 48.Bf3 Kb5 49.g5 f5 50.Kc3 Kxc5 51.Be2 Kb6 52.Bd1 Kb5 53.Be2+ Ka4 54.Kb2 Kb4 55.Bf3 c5 0-1</p>	<p>Deep Fritz - Kramnik, V (2807) [D57] Brains in Bahrain, Manama UAE (5), 13.10.2002</p>
<p>Kramnik, V (2807) - Deep Fritz [D34] Brains in Bahrain, Manama UAE (4), 10.10.2002</p>	<p>1.d4 Nf6 2.c4 e6 3.Nf3 d5 4.Nc3 Be7 5.Bg5 h6 6.Bh4 0-0 7.e3 Ne4 8.Bxe7 Qxe7 9.cxd5 Nxc3 10.bxc3 exd5 11.Qb3 Rd8 12.c4 dxc4 13.Bxc4 Nc6 14.Be2 b6 15.0-0 Bb7 16.Rfc1 Rac8 17.Qa4 Na5 18.Rc3 c5 19.Rac1 cxd4 20.Nxd4 Rxc3 21.Rxc3 Rc8 22.Rxc8+ Bxc8 23.h3 g6 24.Bf3 Bd7 25.Qc2 Qc5 26.Qe4 Qc1+ 27.Kh2 Qc7+ 28.g3 Nc4 29.Be2 Ne5 30.Bb5 Bxb5 31.Nxb5 Qc5 32.Nxa7 Qa5 33.Kg2 Qxa2 34.Nc8 Qc4 35.Ne7+ Kf8 36.Qxe5 1-0</p>
<p>1.d4 d5 2.c4 e6 3.Nf3 c5 4.cxd5 exd5 5.g3 Nc6 6.Bg2 Nf6 7.0-0 Be7 8.Nc3 0-0 9.Bg5 cxd4 10.Nxd4 h6 11.Bf4 Bg4 12.h3 Be6 13.Rc1 Re8 14.Nxe6 fxe6 15.e4 d4 16.e5 dxc3 17.exf6 Bxf6 18.bxc3 Qxd1 19.Rfxd1 Rad8 20.Be3 Rxd1+ 21.Rxd1 Bxc3 22.Rd7 Rb8 23.Bxc6 bxc6 24.Rxa7 Rb2 25.Ra6 Bd2 26.Rxc6 Bxe3 27.fxe3 Kf7 28.a4 Ra2 29.Rc4 Kf6 30.Kf1 g5 31.h4 h5 32.hxg5+ Kxg5 33.Ke1 e5 34.Kf1 Kf5 35.Rh4 Kg6 36.Re4 Kf5 37.Rh4 Kg5 38.Kg1 Kg6 39.g4 hxg4 40.Rxg4+ Kf5 41.Rc4 Re2 42.Rc3 Ra2 ½-½</p>	<p>Kramnik, V (2807) - Deep Fritz [E15] Brains in Bahrain, Manama UAE (6), 15.10.2002</p> <p>1.d4 Nf6 2.c4 e6 3.Nf3 b6 4.g3 Ba6 5.b3 Bb4+ 6.Bd2 Be7 7.Bg2 c6 8.Bc3 d5 9.Ne5 Nfd7 10.Nxd7 Nxd7 11.Nd2 0-0 12.0-0 Rc8 13.a4 Bf6 14.e4 c5 15.exd5 cxd4 16.Bb4 Re8 17.Ne4 exd5 18.Nd6 dxc4 19.Nxf7 Kxf7</p>

a tale of man versus machine, but as a showdown of “man as a performer and man as toolmaker”. His story allows us to make comparisons between his version of events, Kasparov’s claims, and Michael Khodarkovsky’s (MK) insiders look into the Kasparov camp, *A New Era*.

Let’s first take up the issue of “non-computer-like” moves: MK reveals that Kasparov was training for the match against the computer programs Fritz 4 and Hiarc. During the match they would feed the games into these programs and expect them, if given long enough for reflection, to come up with the same moves as Deep Blue.

Except that Deep Blue had a total of 480 chess chips in its system. Its theoretical maximum search speed was about one billion positions per second, while the actual maximum speed was around 200 million positions per second.

In hindsight this was clearly a naïve and foolhardy approach and shows that Kasparov just didn’t understand what he was dealing with. In my view IBM was counting on this to gain the upper hand in the match, at least psychologically. Their approach was also evident in IBM’s treatment of Kasparov and his team, and in their statements to the press.

According to MK, C. J. Tan, the IBM team manager, told the *New York Times*, “Kasparov is going to get the \$400,000. [*The losers share of the \$1,100,000 purse.*] We’re not conducting a scientific experiment anymore. This time, we’re just going to play chess.”

And Hsu, upon shaking hands with Kasparov before the start of game one, reflected that “he [*Kasparov*] was probably smiling about *his* \$700,000. I was wondering what would happen when he received *his* \$400,000 check.”

For his part, before the match, Kasparov was equally confident. According to Daniel King, when Kasparov was asked whether the unthinkable might happen, he

replied, “I don’t think it is an appropriate thing to discuss whether I might lose. I never lose. I have never lost in my life.”

Moreover Kasparov was denied access to any of Deep Blue’s pre-match games. Hsu defends this by saying that the computer had played no public games and that no world championship contender would be expected to reveal their preparation to his opponent.

Therein lies the outlook of the two camps. Each expected to win, but Kasparov is viewing this as a high profile exhibition and possible corporate partnership. And IBM is treating it like a title match.

In the first match in 1996 Kasparov was well accommodated. He had a private area to repose between moves, compete with port-a-john and Toblerone chocolate according to Hsu, and his full entourage had seating in the playing hall and a team room. Furthermore, according to MK the two teams “shared meals, information, and insights quite openly” as befits partners in an experimental endeavor.

For the rematch, again according to MK, there was no team room for the Kasparov camp, while the IBM team had both its own room and an operations room. Too few chairs were made available in the playing room for Garry’s team and the room allotted for his rest between moves was about a minute and a half from the playing area.

MK surmises that such a change in attitude was done in part to upset Kasparov’s emotional equilibrium. Although IBM ultimately arranged to have a sofa placed within the playing room for Kasparov’s comfort.

However Hsu sees things differently, he writes that an “ornate yet comfortable” chair was provide for Garry’s mother, Klara, and that fresh unblemished bananas were available for Kasparov, but that a port-a-john was absent, “possibly because of the difficulty of bringing one in.”

20.Bd5+ Kg6 21.Qg4+ Bg5 22.Be4+ Rxe4 23.Qxe4+ Kh6 24.h4 Bf6 25.Bd2+ g5 26.hxg5+ Bxg5 27.Qh4+ Kg6 28.Qe4+ Kg7 29.Bxg5 Qxg5 30.Rfe1 cxb3 31.Qxd4+ Nf6 32.a5 Qd5 33.Qxd5 Nxd5 34.axb6 axb6 0-1

And Kramnik resigned, however analysis by Mig shows a draw was possible with 35.Rxa6 b2 36.Ra7+ Kg6 37.Rd7 Rc1 38.Rd6+ Nf6 39.Rdd1 b1Q 40.Rxc1 Qf5 41.Rc6 b5 42.Ree6 b4 43.Rb6 Kf7 44.Rxf6+ Qxf6 45.Rxb4 as Black has no way through the fortress.

Deep Fritz - Kramnik, V (2807)

[E19] Brains in Bahrain, Manama UAE (7), 17.10.2002

1.d4 Nf6 2.c4 e6 3.Nf3 b6 4.g3 Bb7 5.Bg2 Be7 6.0-0 0-0 7.Nc3 Ne4 8.Qc2 Nxc3 9.Qxc3 c5 10.Rd1 d6 11.b3 Bf6 12.Bb2 Qe7 13.Qc2 Nc6 14.e4 e5 15.d5 Nd4 16.Bxd4 cxd4 17.Bh3 g6 18.a4 a5 19.Rab1 Ba6 20.Re1 Kh8 21.Kg2 Bg7 22.Qd3 Rae8 23.Nd2 Bh6 24.f4 Qc7 25.Rf1 Kg8 26.Rbe1 Qd8 27.Kg1 Bb7 28.Re2 Ba6 ½-½

Kramnik, V (2807) - Deep Fritz

[D68] Brains in Bahrain, Manama UAE (8), 19.10.2002

1.d4 Nf6 2.c4 e6 3.Nf3 d5 4.Nc3 c6 5.Bg5 Be7 6.e3 0-0 7.Bd3 Nbd7 8.0-0 dxc4 9.Bxc4 Nd5 10.Bxe7 Qxe7 11.Rc1 Nxc3 12.Rxc3 e5 13.Bb3 exd4 14.exd4 Nf6 15.Re1 Qd6 16.h3 Bf5 17.Rce3 Rae8 18.Re5 Bg6 19.a3 Qd8 20.Rxe8 Nxe8 21.Qd2 ½-½

Deep Blue - Kasparov, G (2795)

[C93] New York (2), 1997

1.e4 e5 2.Nf3 Nc6 3.Bb5 a6 4.Ba4 Nf6 5.0-0 Be7 6.Re1 b5 7.Bb3 d6 8.c3 0-0 9.h3 h6 10.d4 Re8 11.Nbd2 Bf8 12.Nf1 Bd7 13.Ng3 Na5 14.Bc2 c5 15.b3 Nc6 16.d5 Ne7 17.Be3 Ng6 18.Qd2 Nh7 19.a4 Nh4 20.Nxh4 Qxh4 21.Qe2 Qd8 22.b4 Qc7 23.Rec1 c4 24.Ra3 Rec8 25.Rca1 Qd8 26.f4 Nf6 27.fxg5 dxe5 28.Qf1 Ne8 29.Qf2 Nd6 30.Bb6 Qe8 31.R3a2 Be7 32.Bc5 Bf8 33.Nf5 Bxf5 34.exf5 f6 35.Bxd6 Bxd6 (see diagram) 36.axb5

Instead it was decreed that nobody would be allowed to use the available rest room if Kasparov was in it or if he was outside of the game room. He further specifies that both the lighting and Kasparov's studded leather armchair were exactly to the champion's liking.

Another bone of contention in the Kasparov camp was the computer printouts of Deep Blue's analysis. An augur of things to come took place in February of 1997 when the teams met for dinner in New York. Khodarkovsky told Tan of his intention to write a book on the match and asked for printouts of the critical positions. He was told, "certainly...but only *after* the match."

Things game to a head after Kasparov's loss in game two. The Kasparov team felt that Deep Blue's play in games one and two were inconsistent and they became suspicious to the point where it affected Kasparov's ability to prepare for game three. He couldn't understand how the computer, in game two, could make a move like 37.Be4 instead of playing 37.Qb6 which won two or three pawns.

Moreover he questioned why the computer spent 15 minutes pondering the move 35.Bxd6 and 6 minutes on 36.axb5 when it's normal reflection time was about 3 minutes. MK writes that Kasparov, "simply did not understand how Deep Blue played the game." His team didn't have the answers and IBM wasn't sharing any information.

Before the start of game three Kasparov requested, through the Appeals Board, the printouts to the moves 35.Bxd6, 37.Be4, and 45.Ra6. Yet Hsu writes that Kasparov "complained that Deep Blue spent the longest amount of time...when it rejected 37.Qb6" and that Kasparov "asked for the log of the wrong move."

When Kasparov made his infamous "Hand of God" statement, an oblique accusation of cheating, Team IBM was fuming. Hsu said he wanted to take

the microphone and suggest they open up Deep Blue to see if Bobby Fischer was inside.

Nevertheless it was Joel Benjamin who defended the team with the remark that Kasparov needs to "come to grips with the fact that Deep Blue can do a lot of things that he [*Kasparov*] did not think were possible."

During game three IBM released the information that other GM's had been involved with the Deep Blue project besides Joel Benjamin and Miguel Illescas. This only spurred the paranoia and suspicion within Team Kasparov. In the press conference after game three Kasparov publicly stated that there was a major difference between the way Deep Blue played in each of the games.

He wondered how a machine capable of producing millions of moves per second could reject such a move as 37.Qb6, but miss the drawing combination at the end of game two and reiterated his demand for printouts.

This reflects another critical aspect of Kasparov's thought processes. He trusted too much in the omnipotence of the computer. The evidence for this came after game one. As the result of a bug, the computer played 44...Rd1 as its final move of the game.

Hsu reports that the Kasparov camp "went into a very deep analysis on why the alternative move 44...Rf5 was no good." In the end they surmised that Deep Blue must have seen the mates 20 or more moves ahead. "I could not help but burst out laughing," he writes, upon learning of this incident.

Before the start of game four IBM provided some printouts, fearing that Kasparov would not appear unless the logs were delivered. Yet only the entry for the move 37.Qb6 was included. Hsu's goes into significant detail about why the computer did not play this move and gives analysis of a three pawn sacrifice that could follow offering Black good prospects.



The three pawn sacrifice is: 36.Qb6!? Qe7! 37.axb5 Rab8 38.Qxa6 (The best line for White is 38.Qe3! axb5 39.Be4) 38...e4! 39.Bxe4 (39.Re1 Qe5 40.Rxe4 Qh2+ 41.Kf2 Bg3+ 42.Kf3 Bd6 draw.) 39...Qe5 40.Bf3 Rd8 with compensation: 41.Qa3 (41.Ra3 Qe3+ 42.Kf1 Qd3+ 43.Be2 Qxf5+ 44.Kg1 Qe5 45.Kf1 (45.Bf3 Re8) 45...Re8 46.Bf3 Bc7! 47.d6 Bb6 48.d7 Red8 49.Re1 Qd6 and Black might

be winning.) 41...Re8 42.Re2 Qh2+ 43.Kf1 Rxe2 44.Bxe2 Re8 45.Bh5 Qf4+ 46.Bf3 Re3 47.Qb2 Qh2 draws.

36...axb5 37.Be4 Rxa2 38.Qxa2 Qd7 39.Qa7 Rc7 40.Qb6 Rb7 41.Ra8+ Kf7 42.Qa6 Qc7 43.Qc6 Qb6+ 44.Kf1 Rb8 45.Ra6 1-0

Kasparov could have drawn with 45...Qe3 46.Qxd6 (46.Qd7+ Kg8 47.Qxd6 Rf8) 46...Re8 47.h4! (47.Bf3 Qc1+ 48.Kf2 Qd2+ 49.Be2 Qf4+ 50.Kg1 Qe3+ 51.Kh1 Qc1+ 52.Kh2 Qf4+=) 47...h5! (47...Qf4+? 48.Bf3 Qc1+ 49.Kf2 Qd2+ 50.Be2 Qf4+ 51.Kg1 Qe3+ 52.Kh2 Qxe2 53.Ra7+ Kg8 54.Qd7+-) 48.Bf3 Qc1+ 49.Kf2 Qd2+ 50.Kg3 Qf4+ 51.Kh3 Qxf5+ 52.Kh2 Qf4+=.

Deep Blue - Kasparov, G (2785)

[B17] New York (6), 1997

1.e4 c6 2.d4 d5 3.Nc3 dxe4 4.Nxe4 Nd7 5.Ng5 Ngf6 6.Bd3 e6 7.N1f3 h6 8.Nxe6 Qe7 9.0-0 fxe6 10.Bg6+ Kd8 11.Bf4 b5 12.a4 Bb7 13.Re1 Nd5 14.Bg3 Kc8 15.axb5 cxb5 16.Qd3 Bc6 17.Bf5 exf5 18.Rxe7 Bxe7 19.c4 1-0

During game four another act of IBM was to irk Team Kasparov. IBM Chairman, Loius Gerstner visited the match site and issued a statement that “we should look at this as a chess match between the world’s greatest chess player and”, after a short pause... “Garry Kasparov.”

To MK this symbolized that IBM was conferring the title of world champion onto Deep Blue and was an intentional slam against Kasparov. When in reality it was more of a chin-up pep talk to the IBM team.

After game four, Kasparov requested that the printouts for games 5-6 be sealed in a locked safe under the control of the Appeals Board, but IBM refused, saying it was not possible. After game five Kasparov stayed seated at the board and demanded the printouts. Here Tan gave the answer that he could have them without any problem.

Later in the evening, when the printouts had still not been delivered, the match arbiter Carol Jarecki was contacted. According to MK, she and Tan turned up afterward with a sealed envelope. Kasparov’s team was not allowed to look inside it and Tan said he was not at liberty to disclose its contents. Jarecki and Khodarkovsky then signed the envelope, but not Tan even though MK directly requested him to.

According to Hsu, “an internal IBM decision was made” to honor the request, but that “a printer had a paper jam” and “there was not enough paper nor enough time to print all the game logs. Only the log for game five was printed.” IBM has since posted the logs for all the games on the web-site www.chess.ibm.com.

MK writes that it was after this episode that Ken Thompson opined “a form of psychological warfare had been organized...and that it had been waged very successfully.”

Yet Hsu writes, Thompson “was the only person outside IBM who got to see Deep Blue’s running log” and that Thompson “had seen the log in real time and was well aware of what happened”.

The pressure of all the combined turmoil made itself apparent in game six when, according to MK, Kasparov transposed his move order by playing 7...h6?!, allowing Deep Blue’s 8.Nxe6! And Kasparov again erred with 11...b5?!, instead of 11...Qb4. He ended up losing one of the shortest games of his career and the match.

Hsu’s opinion is that Kasparov purposely played 7...h6. He notes that a published report in the newspaper, without mentioning which one, stated that Team Kasparov had agreed upon this move and that GK himself “stated months later...that he regretted the decision to play 7...h6.”

Hsu calls it a \$300,000 gamble and “a very risky anti-computer chess move.” His guess is that Kasparov expected Deep Blue to retreat the knight as many commercially available programs were want to do and that had it done so, Kasparov would have a much better position. Hsu concludes that winning the match “should have been exulting, but I was feeling empty inside. The game felt too easy...”

We will never know the full truth of what happened, but Kasparov’s loss and psychological unraveling are still being discussed.

Farndale wrote that stress caused the loss to Deep Blue and that, according to an anonymous source, Kasparov “went into a monumental sulk” and was so disorientated that he lacked the confidence to defeat Kramnik in 2000 “because he hadn’t known what it was like to lose.”

Frederic Friedel, who was an adviser to Kasparov in 1997, considered the match “horribly loaded in favor of the computer...In his final game he practically committed suicide, like a petulant child.”

Christiansen vs. Chessmaster 9000

The world champions aren’t the only ones playing computer matches. Larry Christiansen, the U.S. Champion, recently completed a four-game match against the Chessmaster 9000 playing program. It took place live on the ICC September 29-30, 2002, and ended with a computer victory 2.5-1.5.

The following account was edited from the official press release and web reports posted at www.chessmaster.com. There you can also find all the games analyzed by Yasser Seirawan.

Christiansen, rated 2559, took on four of the computers Grandmaster-level personalities, a different one for each game. Game one saw Christiansen, as black, play “a near-perfect example” of anti-computer chess versus the Alekhine-style personality and score a solid win.

Swedish Chess Computer Association Top 10	
Name	Rating
1 Deep Fritz 7.0	2763
2 Fritz 7.0	2742
3 Shredder 6.0 Paderb	2736
4 Shredder 6.0	2718
5 Chess Tiger 14.0 CB	2717
6 Gambit Tiger 2.0	2717
7 Deep Fritz	2714
8 Junior 7.0	2690
9 HiarcS 8.0	2682
10 Rebel Century 4.0	2676

All running on 256MB Athlon 1200MHz.

Terry Coleman, producer of Chessmaster for Ubi Soft Entertainment said Christiansen “saw right through the traps and just crushed Chessmaster in game one.” In game two Christiansen faced the Fischer-personality. It was a tense positional struggle in which Chessmaster secured a pawn and tied the match at one game apiece.

Game three lasted 4½ hours with Christiansen pressing an attack against the Botvinnik-personality and embarking on a “faulty combination” beginning with a rook sacrifice at move 53. Seirawan’s analysis shows that he had a won game at move forty.

Coleman noted, “even if CM 9000 had lost game three, we would have been proud to have been involved in such a fabulous game.”

The final game pitted Christiansen against the Chessmaster-personality rated at 2767, and based on Johan de Koning’s engine, The King, which is specifically designed to take advantage of the strengths of the engine.

“After 5...Qd5, both Christiansen and The Chessmaster were out of opening theory,” said

Coleman. “The fourth game was played for over 40 moves to a classic draw, completing this very exciting match.”

As an endnote: Its been reported that one of the two towers that made up Deep Blue will become part of the permanent collection of the Smithsonian Institute. And that Kasparov is having a documentary made about him in connection with the Deep Blue match.

Whereas Boyce rightfully contends such matches as these “prove more useful for selling software than advancing science...because chess, at its core, is a game of complex mathematics. While software gets better and runs faster every year, the human brain, well, doesn’t.”

Behind Deep Blue is available from Princeton University Press, (609)-258-4900, www.pupress.princeton.edu, ISBN 0-691-09065-3, Hardback 6 x 9, 320 pp. \$27.95

CM9000 - Christiansen, L (2559)

[D41] Man- Machine Match ICC INT (1), 28.09.2002

1.e4 c6 2.d4 d5 3.exd5 cxd5 4.c4 Nf6 5.Nc3 e6 6.Nf3 Be7 7.cxd5 Nxd5 8.Bb5+ Nc6 9.Ne5 Bd7 10.Bxc6 Bxc6 11.Nxc6 bxc6 12.Nxd5 cxd5 13.0-0 0-0 14.Bf4 Qb6 15.Qd2 Bf6 16.Be3 a5 17.Rac1 Qb4 18.Rfd1 Rfb8 19.Rc3 Qa4 20.Rdc1 h6 21.b3 Qb4 22.R1c2 Re8 23.h3 a4 24.Rc8 Qxd2 25.Rxe8+ Rxe8 26.Rxd2 axb3 27.axb3 Rb8 28.Rb2 Rb4 29.Kf1 Kf8 30.Ke2 Bxd4 31.Bxd4 Rxd4 32.b4 Ke7 33.b5 Rc4 34.b6 Rc8 35.h4 Kd6 36.Rb3 Rb8 37.Rg3 g6 38.h5 g5 39.Ra3 Rxb6 40.Ra7 Rb2+ 41.Kf1 f5 42.R7 d4 43.Rxb6 d3 44.Ke1 Ke5 45.Rh8 Rb1+ 46.Kd2 Rf1 47.f3 Rf2+ 48.Kxd3 Rxd2 49.h6 Rh2 50.Ke3 f4+ 51.Kd3 Rf2 52.Rg8 Rxf3+ 53.Kc4 Rh3 54.Rxg5+ Ke4 55.Rg1 Rxb6 0-1

Christiansen, L (2559) - CM9000

[A30] Man- Machine Match ICC INT (2), 28.09.2002

1.Nf3 c5 2.e3 Nc6 3.c4 Nf6 4.d4 d5 5.cxd5 Nxd5 6.e4 Nf6 7.d5 Nxe4 8.dxc6 Qxd1+ 9.Kxd1 Nxf2+ 10.Ke1 Nxb1 11.cxb7 Bxb7 12.Bb5+ Kd8 13.Ne5 Rg8 14.Nxf7+ Kc7 15.Kf1 g5 16.Kg1 Bg7 17.Nc3 Raf8 18.Bc4 Nf2 19.Kxf2 Rxf7+ 20.Bxf7 Rf8 21.Be3 Rxf7+ 22.Kg1 Rf5 23.Rc1 Bc6 24.Rf1 Re5 25.Rf7 Rxe3 26.Rxg7 h6 27.Kf2 Re6 28.g3 Kd7 29.Rg8 Rf6+ 30.Ke2 g4 31.Ke3 Rf3+ 32.Ke2 Rf5 33.Ke3 Rh5 34.Rxg4 Rxb2 35.b3 Rh5 36.Rc4 Re5+ 37.Kd2 h5 38.Rh4 Rg5 39.Ne2 Kd6 40.Ke3 a6 41.Kf2 Rf5+ 42.Ke3 Rf3+ 43.Kd2 Be8 44.g4 hxg4 45.Nc3 Rf4 46.Ke3 Ke5 47.Rh7 Rf3+ 48.Kd2 Rd3+ 49.Kxd3 Bg6+ 50.Ke3 Bxb7 51.Na4 Bb1 52.Nxc5 Bxa2 53.Nxa6 Bxb3 54.Nb4 Kf5 55.Kf2 e5 56.Nd3 Bc4 57.Ne1 Ke4 58.Kg3 Be6 59.Kf2 Bd7 60.Ng2 Kd3 61.Kg3 0-1

CM9000 - Christiansen, L (2559)

[A28] Man- Machine Match ICC INT (3), 29.09.2002

1.c4 e5 2.Nc3 Nf6 3.Nf3 Nc6 4.d4 exd4 5.Nxd4 Bb4 6.Bg5 h6 7.Bh4 Bxc3+ 8.bxc3 Ne5 9.e3 d6 10.Be2 Ng6 11.Bxf6 Qxf6 12.0-0 0-0 13.Qc2 Re8 14.Rfd1 Nf8 15.Bd3 Ne6 16.Nb3 Rb8 17.a4 Qe7 18.a5 Bd7 19.a6 b6 20.Nd4 Nc5 21.Nb5 Bxb5 22.cxb5 Qf6 23.Bc4 Re5 24.Bd5 Rbe8 25.Rd4 Ne6 26.Rd2 g6 27.Ra4 Kg7 28.Rd1 Re7 29.Rb4 g5 30.Bc6 Qg6 31.Qb2 f5 32.Qb1 Qf6 33.Bd5 f4 34.e4 Nf8 35.f3 h5 36.Qc2 Ng6 37.Qa2 Kh6 38.Qd2 Rg7 39.Qd4 g4 40.fxg4 Nh4 41.Rb2 Rxd4 42.Kh1 Ng6 43.Rf2 Qe7 44.Qd2 Reg5 45.Ra1 h4 46.c4 Qe5 47.Rc1 Kg7 48.Bc6 Qe7 49.Rcf1 Re5 50.Qc3 Kh6 51.Bd5 Reg5 52.Qb3 Qe5 53.Rd1 Rg3 54.hxg3 hxg3 55.Ra2 Rg4 56.Kg1 Qh5 57.Kf1 f3 58.Ke1 f2+ 59.Kd2 Rh4 60.Qe3+ Kg7 61.Rf1 Qe5 62.Kc2 Rh2 63.Qf3 Qf4 64.e5 Qxf3 65.Bxf3 Nxe5 66.Bd5 Rh5 67.Ra3 Rg5 68.Kd2 Ng6 69.Re3 Ne5 70.Ke2 Kf6 71.Rh1 Ng6 72.Rh7 1-0

Christiansen, L (2559) - CM9000

[A07] Man- Machine Match ICC INT (4), 29.09.2002

1.Nf3 d5 2.g3 c6 3.Bg2 Bg4 4.c4 dxc4 5.Na3 Qd5 6.Nc2 Qc5 7.Ne3 Be6 8.b3 cxb3 9.axb3 Nf6 10.Ba3 Qb6 11.Nc4 Bxc4 12.bxc4 Nbd7 13.0-0 e5 14.Qb1 Bxa3 15.Rxa3 Qc7 16.Qa1 a5 17.d3 0-0 18.Nd2 Nc5 19.Rb1 b6 20.Nb3 Nfd7 21.Nxc5 Nxc5 22.e3 Rad8 23.d4 exd4 24.exd4 Na6 25.c5 Nb4 26.cxb6 Qxb6 27.d5 Rfe8 28.Bf3 cxd5 29.Rxa5 Rc8 30.Qa4 Qf6 31.Qxb4 Qxf3 32.Qd4 Rcd8 33.Rab5 h6 34.R5b3 Qf5 35.Kg2 Re4 36.Qb6 Rde8 37.Rf3 Qd7 38.Qb7 R4e7 39.Qxd7 Rxd7 40.Rd3 d4 41.h4 Re5 42.Rb4 Red5 43.Kf3 g6 44.g4 f5 45.g5 ½-½