The Kasparov-World Match

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NOTES

THE KASPAROV-WORLD MATCH

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Canada and UK

The Kasparov-World match was initiated by Microsoft with sponsorship from the bank First USA. The concept was that Garry Kasparov as White would play the rest of the world on the Web: one ply would be played per day and the *World Team* was to vote for its move. On June 21st, 1999, the game duly began with the Team headed by moderator Danny King and four leading young players as coaches, each independently recommending a next move.

With an appropriate emphasis on youth and the future, the coaches were GM Etienne Bacrot (France, 16), FM Florin Felecan (USA, 19), Irina Krush (USA, 15) and WIM Elisabeth Pähtz (Germany, 14). The World Team members not only voted but gradually came together as an effective group around a bulletin board, with a few individuals emerging to fulfil key roles. The unofficial team's strength can be judged in the context of current FIDE listings from the following selection of members, given in illustration with aliases in italics and apologies for omissions:

> Alvarez, Amann, Ansell, Bacik, Bauma, Beer, Bennett, Calhoun, Cardoso, *Casual Observer*, Chernoff, Epishin, Ethelontis, Fleming, Gagne, Gavriel, Georghiou, Gurevich, ter Haar, Henley, Hodges, Kacheishvili, Karayiannis, Karrer, Kastner, Khalifman, Knopfler, Koval, McCarthy, Mikkelsen, Mobley, Morris, Nesis, (Georgi and Vassily) Orlov, Pihlajasalo, Plaskett, (Ken and Natasha) Regan, Rihaczek, Sakaev, Sims, Solozhenkin, Speelman, Spiegel, Spiriev, *Spy49*, Suttles, Svidler, *Ulf*, Vaingorten and Wilczek.

Such a diverse team has never been seen before. Microsoft predicted that this game would become the largest ever interactive event held on the Internet but even they could not have anticipated its impact. An estimated three million chess fans visited the playing site. Moreover, voting is thought to have swelled quickly to about 5,000. While 90 to 95 percent of voters saw only the coaches' moves, the minority convened around the game's bulletin board and of these, a core of 10 to 20 from the list above emerged as regular and respected unofficial analysts.

The obvious should not be missed. Computers have, by using the web, created a new, inclusive mode of play for the world of chess. For the first time in any field, a group attempted to solve a shared problem on the web against fixed, short-term deadlines. The virtual experience came to life in a real way: egos and minds were locked in combat and Kasparov found himself opposed by an unprecedented carbon and silicon intelligence.

However, the World Team had its own problems to solve. The coaches had (1) to identify the right moves and (2) to get them backed in the vote, even if they were not obvious and the moderator deliberately left room for opinion. Behind the coaches, a set of unknown individuals, with different hours and a variety of interests and talents, had to come together as a cohesive team at the bulletin board and work on agreed objectives. A channel also needed to be created to communicate their output to the voters as a whole.

To the credit of the coaches, no two managed to coincide on a weak move to lose the game early, see below. The World was playing much better than expected and the bulletin board was beginning to produce more signal and less noise. Irina Krush emerged as a link between the bulletin board and the voters, encouraging serious analysis on the board, contributing herself and relating to the ideas of others. She attracted the popular vote with good moves supported by detailed arguments by herself, SmartChess, the Russian GM School and the World Team.

The choice of moves

With care, increasing energy and several slices of luck, the World Team played a sound opening and middle game. Kasparov was surprised by 10. ... Qe6, a genuine innovation, and in turn surprised the World Team with 35. Kh1.

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Although a few losing moves came a close second, Black survived 50 moves with drawing chances. By this time, the game was heading for the KQPKQPP, KQPKQP and possibly the rare KQQKQQ, alias *4Q*, endings. Anticipating this, the World Team had asked for and surprisingly been given a full computer analysis of 4Q (see Nalimov, Wirth and Haworth, 1999) and there was a slim possibility that KQQKQP and KQPKQP analyses would follow.

With the months of intense commitment mounting up and the draw apparently within touching distance, the bulletin board had become increasingly concerned about a rogue vote and the possibility of *ballot stuffing*, either to sabotage the game or misguidedly support the wrong move. Some had reservations about democracy; others feared that democracy would be undermined. Although the Team voted solidly for 51. ... Ka1, the inferior move 51. ... b5 narrowly won and plausible claims were made by self-acclaimed ballot-stuffers that they had successfully conspired to hijack the vote. Microsoft's response, that this was not possible, was soon countered by Martin Sims' controlled demonstration which single-handedly provided 5% of the vote for the sacrificial 53. ... Qe2. Confidence in the playing conditions was dented and belated suggestions were tabled for ensuring the integrity of the vote.

The scene was then set for what was probably the crucial weakening of Black's position. Consensus on the bulletin board eventually developed for 52. ... Kc1, Krush's nomination, but two other coaches called for 52. ... Kb2 with some support from the moderator. This won by a surprisingly small majority and an important tempo was lost.

The World Team was still pursuing the draw when the technology which had empowered them suddenly depowered, a phenomenon not unknown in other walks of life. Kasparov's 58. g6 was not notified to Krush on time and her reply of 58. ... Qf5 was similarly delayed to the point where Microsoft staff were not available to post it on the game site. Again, the move 58. ... Qe4, supported by two coaches, won the vote but it was known to lose quickly by the analysts at the bulletin board. Microsoft did not rerun the vote which was undoubtedly affected by the technical problems and the World Team resigned in the only way possible. It voted, indeed multiple-voted, for the Queen sacrifice 59. ... Qe1. Microsoft then overturned the vote on the grounds of ballot stuffing, a supreme irony.

The frustration of World Team members was evident; many had spent several hours daily for weeks accurately analysing the game, only to see an apparently defensible position lost because of another technical hitch. It is a testimony to the reality of the virtual experience created by the web that feeling ran so strongly. Nothing comparable had happened at the chessboard since the dramas of the Fischer-Spassky match. The shockwave was reflected in the headlines of the web and the world's press.

After the game: an inside view

Post-game endgame work by Karrer and thorough analysis by Ken Regan and SmartChess staff currently suggests that 54. ... Qd5 draws. Certainly, the game was theoretically lost after 54. ... b4 when Kasparov had a *mate-in-83* on move 137, assuming as seems reasonable that Pawns only promoted to Queens. Intriguingly, Kasparov's immediate post-game analysis did not find the route to a win. However, the email glitch undoubtedly prevented onlookers from witnessing a fittingly elegant finale to this game. History cannot now record Kasparov successfully (or not) bridging some 15 moves until his computer, DEEP JUNIOR, picked up a won KQPKQ ending on its radar. Sadly, a game that could have been on a knife edge for a considerable time fizzled out in three moves.

A detailed commentary on the game can be found elsewhere (Krush and Regan, 1999). Here, we focus on the impact this game has had and on the prospects for similar contests in the future. This event was certainly a world first in many respects and was bound to be an experiment and a learning experience for everyone involved. Given the smooth progress of the first three months, it was easy to forget this. The game exceeded the expectations of its sponsors, organisers and participants with its quality and its ability to include players at all levels in the experience.

The strengths of the event were undoubtedly the long-term commitment of host MSN, sponsor First USA, initiator Garry Kasparov, moderator Danny King and the four coaches, and the World Team's deep passion for the game. Kasparov realised that he had to dig deep to win and pursued the full point with a determination that deserves respect. Krush earned the plaudits of the World Team by developing it as a collective resource, a role well beyond her contract, at the same time managing to ignore the slings and arrows of the board's more destructive elements. Within the World Team, feats of chess analysis, organisation and technical development all improved Black's prospects in the game. Several unofficial analysts came forward with ideas which saved the Team from disappearing

without trace before move 40: SmartChess staff accumulated this analysis in pgn format for publication. The second author here also salutes the World Team's indefatigable volunteer editor, co-ordinator and ringmaster, Peter Marko. His *Essential Links* and *Selected Articles* highlighted the most valuable contributions to the bulletin board. The Team's good humour and united attitude to anti-social behaviour were assets: John O'Connell for example organised a petition to successfully persuade Irina Krush to rejoin the bulletin board despite its trouble-makers.

The Team developed and used auxiliary technology including a pgn-browser and bulletin board by David Noriega alias *99% Energy*, a pre-vote site by Mark Stowe alias *marcsto*, Bob Hyatt's ftp server for CRAFTY and Nalimov's endgame tables, endgame evaluation services by John Tamplin and Carter Mobley alias *Alekhine via Ouija*, Richard Bean's archive, graphics from Steen Jakobsen alias *steni* and the Computer Chess Team led by Dave Bergan, Jim Gawthrop and Gordon Swobe.

Improvements can be made in processes, group dynamics and technology and this kind of event can advance if issues in these areas are addressed for the future. Problems were mostly caused by inadequate planning and communication rather than by technology. Key examples included the lack of published rules of play, the overly-independent coaches' recommendations, the lack of substitutes for inevitably absent coaches, weaknesses in the voting system, the absence of an official moderator for the Team's bulletin board, the lack of any link between the Team's board and the coaches and voters, and finally the failure of basic email between Microsoft and Krush. As the game extended into its fourth month, it was clearly becoming a victim of its own success. Neither sponsors nor key players had planned for anything of this duration. Presumably, budgets, time and priorities were coming under pressure and there were no contingency measures in place. The World Team's own developments showed that better technology would help including more persistent and searchable bulletin boards, a protocol for the management of analysis by the Team, and voting mechanisms to enable the Team to focus its resources.

The Kasparov-World game was a success from many points of view. It certainly gave thousands the feeling of facing the world's best player across the board and did much for the future of the game. Described by Kasparov as "phenomenal ... the most complex in chess history", it is probably a worthy 'Greatest Game' candidate. Computer technology has given chess a new mode of play and taken it to new heights: the experiment deserves to be repeated. We look forward to another game and experience of this quality although it will be difficult to surpass the event we have just enjoyed. We salute and thank all those who contributed - sponsors, moderator, coaches, unofficial analysts, organisers, technologists, voters and our new friends.

G. Kasparov - The World: The Web, 21st June - 22nd October, 1999.

Notation: ' for *unique optimal move*; " for *unique value-preserving move*; [...] for equi-optimal move(s) and {...} for commentary. Other annotation is from Krush and Regan (1999).

1. e4 c5 2. Nf3 d6 3. Bb5+ Bd7 4. Bxd7+ Qxd7 5. c4 Nc6 6. Nc3 Nf6 7. 0-0 g6 8. d4 cxd4 9. Nxd4 Bg7 10. Nde2 Qe6! 11. Nd5! Qxe4 12. Nc7+ Kd7 13. Nxa8 Qxc4 14. Nb6+ axb6 15. Nc3! Ra8 16. a4! Ne4! 17. Nxe4 Qxe4 18. Qb3 f5! 19. Bg5 Qb4! 20. Qf7 Be5 21. h3! Rxa4 22. Rxa4 Qxa4 23. Qxh7 Bxb2 24. Qxg6 Qe4 25. Qf7 Bd4 26. Qb3 f4! 27. Qf7 Be5 28. h4 b5 29. h5 Qc4! 30. Qf5+ Qe6 31. Qxe6+ Kxe6 32. g3 fxg3 33. fxg3 b4! 34. Bf4!? Bd4+ 35. Kh1! b3 36. g4 Kd5! 37. g5 e6! 38. h6!? Ne7 39. Rd1 e5 40. Be3 Kc4 41. Bxd4 exd4 42. Kg2 b2 43. Kf3 Kc3 44. h7 Ng6 45. Ke4 Kc2 46. Rh1 d3 47. Kf5 b1=Q 48. Rxb1 Kxb1 49. Kxg6 d2 50. h8=Q d1=Q {KQPKQPP: 7Q/1p6/3p2K1/6P1/8/8/1k1q4+w} 51. Qh7! b5? 52. Kf6+ Kb2? 53. Qh2+ Ka1 54. Qf4 b4?? {losing in theory and in practice: Qd5 was required} 55. Qxb4 {KQPKQP: 8/8/3p1K2/6P1/1Q6/8/8/k2q4+b} Qf3+ 56. Kg7" d5 57. Qd4+!" Kb1' 58. g6" Qe4? [Qf5'] 59. Qg1+' Kb2 60. Qf2+' Kc1 [Ka1'] 61. Kf6' d4' 62. g7' 1-0.

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