Table of Contents

Table of Contents .................................................................................................................................... 65
By the Waters of Cologne (I.S. Herschberg and H.J. van den Herik) ................................................. 65
Intuition in Chess (A.D. de Groot) ........................................................................................................ 67
Selective Search without Tears (D.F. Beal) .......................................................................................... 76
When Will Brute-Force Programs Beat Kasparov? (D.N.L. Levy) ..................................................... 81
Notes: ....................................................................................................................................................... 87
    A Response to the Van Bergen/Storm KPK Endgame Result (A. Reed) .................................. 87
Reviews: .................................................................................................................................................. 88
    Turbo Game Works: Tools for Turbo Pascal (D.F. Beal) .......................................................... 88
    Computers in Chess-Solving Inexact Search Problems (D.F. Beal) ........................................... 88
News, Information, Tournaments and Reports: .................................................................................... 90
    Looking Back and Ahead (M. Newborn) .................................................................................... 90
    ICCA's Future (D.N.L. Levy) ...................................................................................................... 91
    The Fifth World Computer-Chess Championship (H. Horacek) ........................................... 92
    Results and Games of the World Computer-Chess Championship (K. Thompson) .......... 97
    Hitech Update (H. Berliner) ......................................................................................................... 111
    The Swedish Rating List Updated (G. Grottling) ....................................................................... 113
    Third International Symposium on Artificial Intelligence and the Game of Chess (B. Pernici and M. Somalvico) .................................................................................................... 114
    The Fifth Conference on Advances in Computer Chess (Noordwijkerhout) ............................. 116
    Computer Chess at the ACM/IEEE Computer Society Fall Joint Computer Conference (Dallas, Texas) .............................................................................................................................. 118
    Correspondence ............................................................................................................................. 124
How the Journal Reaches You ........................................................................................................... 128

BY THE WATERS OF COLOGNE

Imagine a city divided in itself by a millennium or so. In the heart of Cologne there is the cathedral, easily the largest and most ornate in Christendom, and its surrounding square, where nothing seems to matter if it has happened after the year 1100. Then walk a mile and find yourself in the grounds of Cologne’s Trade Fair, devoted this season to computers, where quite obviously nothing matters that is older than a twelvemonth. While the old city now is a pedestrian zone, the computers outpace one another at electronic speeds. A city of contrasts, then, and a fitting host to a tournament divided against itself.

Do not imagine that the tournament was the one and only attraction in the Fair grounds. In all objectivity: it occupied no more than one hundredth of the area devoted to the Computer Fair, in a sense an also-ran side show to the high and mighty commercial exhibitors. Yet, strikingly, its competitors were lodged in the heart of the medieval town which looks back in pride on its long and distinguished history under the Romans and under the primeval tribes long before them. In such surroundings, with the burden of history ringing clearly in everyone’s ear, and a commuting mile spanning millennia, division of the tournament against itself is not a thing to be wondered at.
Your editors beg to be forgiven for being unable to draw any firm conclusion from the matches played. All we can say is that, to us, the queries raised outnumbered the games settled. What did prevail, brute force or bright touches? The ‘et tu, Brute’ party might point with pride to Cray Blitz, the undisputed winner, its detractors might cite another Cray fish, Lachex, which did no better than 2 out of 5 for a twelfth place.

And what about a rational explanation for Rebel’s success? True to its name, in free-buccaneering fashion, it met and played rings around the mighty hosts of a Cray, an Amdahl, and a conglomeration of Suns, only to lose against Hitech (a Sun with 64 VLSI satellites) and, marginally, but decisively, from Bebe, a dedicated Sys-10 Chess Engine. Was this a contest between Rebel’s David and five Goliaths in succession? Did David win on points? The Editors confess they stand baffled, since David’s speed, in nodes per second, was dwarfed indeed by all of his opponents. It can even be argued that rebellious little David was not in the fittest of conditions; he begged to be excused for a quarter of an hour because the poor mannikin had run a fever, overheating his chips by dint of furious cogitation.

If you, gentle reader, now should think that brute force, or nodes per second, or whatever Mips equivalent is most dear to your heart stands for nothing, - be disabused: Dutch did creditably, much more so than three years ago against a stronger field, though it has not changed except for a speed-up, roughly by a factor three. A mere refurbishing of its hardware gave it just short of two additional full-width plies, making it more brutish in proportion and netted it an extra 20% of score ...

A contest divided in itself in a city similarly torn between its past and its future is not an unnatural outcome on the waters of the Rhine which flow past Cologne and neatly divide the ancient city from the modern fair. In all this, it should be remembered that with only five games for each entry to play in a field of 23 contestants, Lady Luck is undoubtedly given too free a hand, no matter how well-tempered her influence by necessarily complex tournament rules. No doubt the winner is best, we trust. The open question in our mind is simply by how much he is better and what trust we can have in the ranking of the runners-up?

Bob Herschberg
Jaap van den Herik

Not unnaturally, the present issue is dominated by what happened in Cologne: there is not only the Association’s Triennial Meeting and the Fifth World Championship to report on, but also a conference devoted to the central issue of ‘selective search versus brute force’ in successful chess programming. You will find three papers reproduced; more will follow in the next issue.

The ICCA has a tradition of inviting distinguished pioneers to address their successors on these occasions: in 1980 we were proud to have Dr. Claude Shannon, 1983 saw Dr. Mikhail Botvinnik and Dr. Hans Berliner share pride of place. In the same vein, Dr. Adrian de Groot was our guest of honour in Cologne and presented the conference’s keynote speech, which we are happy to reproduce verbatim in the pages that follow.

The Editor

Copy for this issue was set by West Mount Technology, Poortweg 4, Delft, The Netherlands.