That all-round nice guy, Richard Lang

Martin Bryant (pictured right) profiles Richard Lang, author of Cyrus and Psion Chess, and creator of the Mephisto Amsterdam chess machine

This month's column features a profile of the computer chess programmer, ex-London marathoner, and all-round nice guy, Richard Lang.

Richard is responsible for the Psion range of 16-bit chess programs, and for the Mephisto Amsterdam dedicated chess machine. During the past five years his success in many European and World championships has proved him to be probably the top computer chess programmer in Britain, and certainly one of the best in the world.

Richard started writing his first chess program in early 1981 on a home-built Nascom-2 computer with a 4MHz Z80 processor.

In September 1981 his *Cyrus* program won the European Microcomputer Chess Championships in London, winning all its five games. This gave Richard the impetus to leave his job as a research scientist, and he started work with David Levy's chess programming company Intelligent Software. Over the next few years he programmed *Cyrus* to run on several home computers and dedicated chess machines.

In 1984 he went freelance in order to be able to write a new program designed for 16-bit machines. The resulting program, *Psion Chess*, was a joint winner in the 1984 World Microcomputer Chess Championships, held in Glasgow as part of the Scottish Chess Federation's Centennial Year. The program was published by Psion for the Sinclair QL. As well as having outstanding chess play, it was the first to give the option of a stunning 3D-graphics board display.
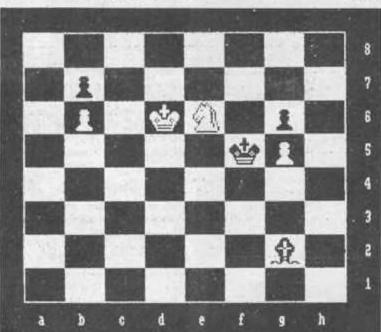
During 1985 Richard improved the program and translated it into 8086 Assembly Language. Versions of *Psion Chess* were then published for the Apple Macintosh and the IBM PC and its clones. The graphics for all the programs were designed and programmed by Psion, leaving Richard free to concentrate on the chess playing algorithms to greater effect.

Also in 1985 – a busy year – he was approached by Hegener and Glaser of Germany (manufacturers of the Mephisto dedicated chess computers) who

wanted a new program for their top machine. Richard worked with German chess expert Ossie Weiner and a team of hardware engineers to produce the Mephisto Amsterdam.

This program slaughtered the opposition in the 1985 World Microcomputer Chess Championships held, appropriately enough, in Amsterdam. The team of three Mephisto Amsterdam machines scored 22 out of a possible 24 points, with 21 wins, two draws and only one lost game. They walked away with first, second and third places and, of course, the team prize.

The Mephisto Amsterdam is now re-

garded as the Rolls-Royce of dedicated chess computers. Its rating has been independently assessed by several sources as between 2000 and 2250 ELO. With 64K Rom, 16K Ram, it uses a 12MHz 68000 processor, and if you've got about £900 to spare, then pop along to Harrods and buy one (yes, I know it's a lot of money, but then Rolls-Royces don't come cheap).

Since the 1985 tournament, Richard has continued to improve his program and has helped to produce a version for the Atari ST computer. For development Richard uses a TDI Pinnacle computer which has a 12MHz 68000, a half Megabyte Ram, and a 10Mb hard disc.

There has always been disagreement between chess programmers about whether "brute-force-full-width" or "selective search" is the best approach.

Richard has no doubts. He has always believed firmly in the selective approach. He also believes – reasonably enough – that it is important for chess programs to contain a large amount of chess knowledge.

And what of the future for programs such as *Psion Chess*, and dedicated chess machines?

Richard feels that chess programs will continue to improve as hardware gets faster and software gets better. Messrs Karpov and Kasparov can relax on their laurels for a little while though. According to Richard they will be under no threat from a computer program this century. Sighs of relief from Moscow.

One of the biggest recent improvements in chess programs has been in their endgame play. As an illustration, at a chess tournament in Helsinki the FIDE Master Harri Hurme made a speech about chess computers and stated that the machines were still "stupid", above all in endgame strategy. However, Hurme then played a demonstration match against the Mephisto Amsterdam and, unfortunately for him, lost after getting into a complicated Bishop-Knight endgame!

The final moves of the game are shown below (Mephisto playing white).

78	Ne6–c5	Kf5xg5
79	Kd6–c7	Kg5-f4
80	Nc5xb7	g6–g5
81	Nb7–d8	g5–g4
82	Nd8–c6	Bg2xc6
83	Kc7xc6	g4–g3
84	b6–b7	g3–g2
85	b7–b8/Q+	Kf4–f3
86	Qb8–b6	Kg3–f3
87	Qb6–g1	Resigns

And, as a final thought, on last year's BBC2 chess series, British Grand Master Raymond Keene stated that in his opinion he could take on a hundred chess computers simultaneously and beat them all.

However, I wonder if he realised that during one of his simultaneous displays last year he played Richard Lang, and he lost! And Richard freely admits that he can't play nearly as well as his program!