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Richard Lang ^[3]

Richard Lang,

a British professional computer chess programmer. He is author of the mighty chess programs [Cyrus](#), [Psion](#) and [Chess Genius](#), and their respective [dedicated incarnations](#), most notably the Psion and Chess Genius programs inside [Mephisto](#) computers, dominating microcomputer chess in the 80s and 90s with ten [World Microcomputer Chess Championship](#) titles in a row, from 1984 until 1995.

After first trials, Richard Lang started his computer chess programming career in January 1981 after he had absorbed [Dan](#) and [Kathe Spracklen's](#) book about [Sargon](#) which provided a complete [Z80 Assembly](#) listing ^[1]. He saw several ways to improve, not only in speed, but also in better [algorithms](#) and ways of obtaining a [score](#) for [chess positions](#) ^[2].

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Photos



[Ossi Weiner](#), [Manfred Hegener](#) and Richard Lang, [WMCCC 1985](#) ^[4]



Lang playing [Mephisto](#) at the [ACM 1989](#) in [Reno](#) ^[5]

Cyrus

Lang's first chess program, [Cyrus](#), was written in [Z80 Assembly](#). It had an astonishing debut at the [2nd European Microcomputer Chess Championship](#) at the [PCW](#) Show in September 1981 in [London](#), winning all five games and the tournament. Lang immediately was offered two contracts by [David Levy](#) and [Kevin O'Connell](#), one for Cyrus, and one to work as programmer for [Intelligent Software](#). Lang accepted, and turned his hobby into a job. Cyrus for [Sinclair](#) was his first commercial entry, followed by programs for various [dedicated chess computers](#) merchandised by *Intelligent Software*, as well a further improved

version of Cyrus.

Psion

In about 1983 Richard Lang started to write his new program [Psion](#) for [68000](#) based processors. He was about to abandon the work for [Intelligent Software](#), who continued their own work by owning the Cyrus brand by primary programmer [Mark Taylor](#), yielding in [Cyrus 68K](#). Psion Chess was marketed first by [Sinclair Research](#) for [Sinclair QL](#) computers ^[6] and later under [Psion's](#) own label for [Apple Macintosh](#), [Atari ST](#) and in late 1983 for the [IBM PC](#) with [8086/88](#) processors ^[7].

Mephisto and Genius

In 1985 Lang started to collaborate with [Hegener & Glaser](#) and [Ossi Weiner](#), porting [Psion](#) to their dedicated [Mephisto](#) chess computers ^[8]. Psion evolved to [Chess Genius](#), also ported to [PC's](#) for the [MS-DOS](#) operating system, and later to [Windows](#) ^[9]. Lang's Mephisto programs dominated the microcomputer chess scene from the mid 80s until the beginning of the 90s. He was multiple [World Microcomputer Chess Champion](#), last title with Genius (shared with [MChess](#)) at the [WMCCC 1995](#). In 1994 during the Intel Grand Prix Cycle ^[10] in London, Genius won a speed chess game (25-minutes per side) against [Garry Kasparov](#) ^[11].

Quotes

Quote by [Kaare Danielsen](#) from his [WMCCC 1987](#) report ^[12]

Clearly, Richard Lang has produced the strongest microcomputer program in the world. It searches 4-5 plies [brute force](#) plus up to 6-7 plies [selective search](#). The program contains a lot of [chess knowledge](#), which is used both in the [tree](#) and to create [piece-value-tables](#). The chess knowledge was obtained from chess masters, who analyzed games played by the program. The program has an [asymmetric evaluation](#) function, which emphasis safety (has rules like 'do not start a wild attack, but worry a lot if the opponent does so'). The program searches about 4000 [nodes per second](#) on a 28 MHz [68020](#), but this includes a thorough analysis at every node, including a [swap-off evaluation](#) (static analysis of captures instead of a [capture search](#)).

Resume

In 2002 Richard Lang founded his own company, merchandising Chess Genius for various platforms with focus on [PDA](#) and [mobile phones](#), recently also for [Android](#) ^[13]. In an 2003 interview, Richard Lang stated that there is still much of Cyrus in current versions of Chess Genius. For example, he had never used [quiescence searches](#) and relied instead on a [static swap off routine](#). More recently he has failed to make progress with top PC programs. In part perhaps due to his programming techniques do not scale well on very fast hardware. The program has become very complex, and unfortunately the complexity seems necessary and new ideas have not really worked ^[14].

Publications

- [Tony Harrington](#) (1983). *Winner Takes All*. [Personal Computer World](#), September 83, [pdf](#) hosted by [Mike Watters](#)
- [Göran Grotting](#) (1987). *Mr. Lang, wo bleibt die Tiefe? Ein Interview mit Richard Lang*. [Modul](#) 4/87, [pdf](#) hosted by [Hein Veldhuis](#) (German, translation from Swedish [PLY magazine](#))
- [Richard Lang](#) (1989). *The Ninth World Microcomputer Chess Championship*. [ICCA Journal](#), Vol. 12, No. 4
- Staff (1995). *An Interview with Richard Lang*. [Computer Chess Reports Vol. 5 No. 3+4](#) pp. 63
- [Richard Lang](#) (1995). *Chess Genius 4*. [Computer Chess Reports Vol. 5 No. 3+4](#) pp. 80
- [Richard Lang - Question & Answer Interview given to a German magazine in 2003](#), pdf hosted by [Mike Watters](#), [Chess Computer UK](#)

External Links

- [Richard Lang's ICGA Tournaments](#)
- [ChessGenius](#). World class chess software © Lang Software Limited
- [Sinclair QL Computer Wiki - Richard Lang](#)
- [Chess Computers - The UK Story](#) from [Chess Computer UK](#) by [Mike Watters](#)
- [Lang, Richard](#) from [Schachcomputer.info - wiki](#) (German)
- [Meet the Authors](#) by [Ed Schröder](#)

References

1. [^] [Dan Spracklen](#) and [Kathe Spracklen](#) (1978). *SARGON: Computer Chess Program*. Hayden Bk.Co. ISBN: 978-0810451551, [amazon.com](#)
2. [^] [Tony Harrington](#) (1983). *Winner Takes All*. [Personal Computer World](#), September 83, [pdf](#) hosted by [Mike Watters](#)
3. [^] [Historic Pictures](#) by [Ed Schröder](#)
4. [^] Picture from [Computerschach und Spiele](#) hosted by [ChessComputers.org](#), [Hegener & Glaser \(Mephisto\)](#)
5. [^] [Lang playing Mephisto at the 20th ACM North American Computer Chess Championship in Reno](#), 1989, Gift of [Monroe Newborn](#) from [The Computer History Museum](#)
6. [^] [Sinclair QL Computer Wiki - Psion Chess](#)

7. [^ Psion Chess](#) from [MobyGames](#)
8. [^ Mephisto](#) by [Richard Lang](#)
9. [^ Richard Lang \(1995\)](#). [Chess Genius 4. Computer Chess Reports Vol. 5 No. 3+4](#) pp. 80
10. [^ GM Magazine: Vol. 12 Intel Grand Prix London 1994 {DVD}](#) by [GM Daniel King](#)
11. [^ Matches](#) by [Ed Schröder](#)
12. [^ Kaare Danielsen \(1987\)](#). [The 7th World Microcomputer Chess Championship, Rome, Italy, September 14-20, 1987. ICCA Journal, Vol. 10, No. 3](#)
13. [^ ChessGenius World class chess software](#) © Lang Software Limited
14. [^ Richard Lang - Question & Answer Interview given to a German magazine in 2003](#), pdf hosted by [Mike Watters](#), [Chess Computer UK](#)

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