

Book reviews

The art of Prolog—second edition by Leon Sterling and Ehud Shapiro, MIT Press, Cambridge, MA 1994, pp. 509, £19.95 (paperback), £44.94 (hardback), ISBN 0-262-19338-8.

This is a revised and extended version of what is for many *the* standard text book on Prolog. The most immediately obvious difference with the original edition is the revised formatting, with more white-space and a clearer distinction between the fonts used for Prolog code and for text. Seemingly superficial, such things can make a big difference to the usability of a book, and the changes are successful here. More substantive changes include the removal of a number (hopefully all, but who would be so bold as to claim this!) of typographical errors, and best attempts to conform to the newly emerging Standard Prolog. A new chapter on program transformation has been added and the chapters on interpreters and logic grammars extensively revised.

The new chapter on program transformation is an important complement to the earlier chapter on program development. Together they provide some basic tools for making this transition from a writer of neat Prolog predicates to a writer of effective Prolog programs in the large. “Effective” means efficient, reliable and maintainable. Gone are the days when Prolog was slow. O’Keefe (1990) gives good demonstrations of this, and compiler technology has improved further since he wrote his book. Reliability is what systematic declarative program development can give you. Maintainability is a little under-sold in Sterling and Shapiro. Declarative programming can make for easily maintained code. However, the code still needs to be explicitly laid out and supported by effective commenting. These topics are not explicitly handled in this book to any great extent, but they are of vital importance (e.g., Dodd, 1990; Krause, 1995).

Sterling and Shapiro continues to evolve as the first, and largest, step on the way to a deep understanding of Prolog as a valuable tool for program development. Start here, and then read O’Keefe (1990) and Dodd (1990).

References

- Dodd, A, 1990, *Prolog: A Logical Approach*. Oxford University Press.
Krause, PJ, 1995. *Guidelines for the Development of Prolog Programs*. ICRF Technical Report St/ICRF/1800/14.
O’Keefe, RA, 1990. *The Craft of Prolog*. MIT Press.

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Executable modal and temporal logics by M. Fisher and R. Owens, Springer-Verlag, Germany, 1995, 180 pp. DM 46.

This edited book contains updated and extended versions of the papers presented at the *Workshop on Executable Modal and Temporal Logics*. There is a trend in the field of computer science of using modal and temporal logics in the formalisation of various real-time systems, as well as in knowledge base representation. Naturally, there is a need for efficient execution of these kinds of representations. The current volume is a contribution towards this need.

The volume is a collection of ten papers, including one from the editors themselves introducing and surveying the field of modal and temporal logics. The other contributions start with the work of