



rectangle' figure is not quite so good and requires 14% more iterations.

4. Conclusions

In conclusion, the membrane analogy has been shown to be helpful in understanding the S.O.R. process and in explaining and testing further the 'equivalent rectangle' rule for selecting over-relaxation factors. The tests reinforce the conclusion that the 'equivalent rectangle' rule is simple to use and accurate for a very wide variety of shapes.

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Fig. 2. A comparison of membrane and 'equivalent rectangle' methods for calculating optimum over-relaxation factors

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Book Review

Symbol Manipulation Languages and Techniques, Proceedings of IFIP working conference on symbol manipulation, edited by DANIEL G. BOBROW, 1968; 487 pp. (Amsterdam: North Holland Publishing Co., 1968s.)

This book is intended to be a summary of current techniques on symbolic and algebraic manipulation. The papers in it fall into three classes:

- (1) Descriptions of various languages and extensions to languages to allow string and symbol manipulation. (e.g. LOGOL, TRAC, and SLIP).
- (2) Analyses of some of the data structures and concepts required in non-numeric operations.
- (3) Description of some problems tackled in the field, notably on algebraic formula manipulations.

Also included is a comprehensive and well indexed bibliography of published material on non-numeric computing.

Although some of the items in this book are excellent (particularly in class (2)) the general quality is uneven and the transcripts of the discussions on the individual papers serve very little purpose other than to illustrate the interests and prejudices of the speakers. The effect of the book is rather unsatisfying as there is very little relationship or continuity between successive papers, and the discussion periods do not fill this gap. Of course, this criticism may be levelled at practically every published symposium proceedings. The necessity of publishing every paper presented can stultify the efforts of the best editor to provide logical and comprehensive bridging material, even if he has the energy to do so after the difficulty of extracting publishable papers from all the authors.

Like the curate's egg, then, this book is good in parts, and the bibliography given should be very helpful to someone entering the field of symbolic manipulation.

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