ESSENTIAL NEW BOOKS FROM CHAPMAN AND HALL EXPERT SYSTEMS: KNOWLEDGE, UNCERTAINTY AND DECISION lan Graham and Peter Lieweivn Jones

This book summarises the present state of the art in knowledge engineering and expert systems and brings together much of the necessary underlying theory drawn from related disciplines.

After an overview of the evolution of artificial intelligence, the book focuses on knowledge: its nature, its representation in the computer as a knowledge base, and the relationship of this to the technology of database management. The problems of handling uncertainty in its various forms are covered, with a review of the different methods available for its representation and management, including probability theory, Bayes Theorem, and Certainty Factors. The theory of fuzzy sets is defined and explained in particular detail.

The process of applying knowledge in order to reach a decision in the presence of uncertainty is then examined. Both classical and non-standing logics are discussed, with especial attention paid to non-monotonic and fuzzy logics. Inference methods and control strategies are explained, and the relationship between knowledge based systems and decision support systems is defined.

March 1988 c. 370 pages Hb 0 412 28510 X c.£19.50

EXPERT SYSTEMS FOR SOFTWARE ENGINEERS AND MANAGERS S David Hu

This book explores various aspects of expert system development and provides computer professionals with the capability of employing expert system technology in software development. The author defines and gives an overview of expert systems, describes the basics of expert systems technology and details the skills, knowledge and tools that software engineers and managers will need to have. He also reviews historical applications of expert system technology and describes major applications of expert systems to conventional business software packages.

February 1988 c.300 pages Hb 0 412 014718 £32.00

Books may be ordered from the Promotion Department at the address below or phone 0264 332424 and ask for the Order Department.



The knowledge engineering review

Notes for Contributors

Contributions for publication should be addressed to Dr. John Fox, Editor, The Knowledge Engineering Review, Biomedical Computing Unit, PO Box 123, Lincoln's Inn Fields, London WC2A 3PX, England, or may be submitted through a member of the Editorial Advisory Board (addresses inside front cover). Submission implies that the manuscript has not been published previously nor currently submitted for publication elsewhere.

All contributions, whether articles, correspondence or reviews, must be sent in triplicate and typed on one side of the paper, with wide margins and double-line spacing throughout. Any minor corrections should be made neatly in the typescript, leaving the margins clear. The author is invited to nominate up to five possible referees, who will not necessarily be used.

Articles must be accompanied by a brief, informative rather than indicative, abstract. Headings should be set out clearly but not underlined. Primary headings should be in lower case, at margin, with arabic numeral; subheadings should be numbered 2.a., 2.b., etc., and tertiary headings, 2.a.1., 2.a.2. No cross-references should be given by page number, but 'above' and 'below' should be used with the section specified, e.g. Section 2.a.2. The SI system of units should be used. The author should mark in the margin of the manuscript where figures and tables may be inserted. References to points in larger works should, where possible, quote the page reference, e.g. Ager, 1981, p. 102.

Tables should be typed with double-line spacing on sheets separate from the running text. Each table must have a caption that will make the data in the table intelligible without reference to the text.

Illustrations should be drafted for reproduction as full page (148 mm) width. Originals should normally be drawn at twice final area and must be sent in a flat package; larger drawings may delay publication. Lettering should be of a size so that when reduced the smallest lower-case letters will not be less than about 1 mm. Avoid gross disparities in lettering size on a drawing. Duplicates of illustrations should be sent, and may be prints or, preferably, photocopies reduced to final size. Illustrations in the text, both line drawings and photographs for halftone reproductions, will be referred to as figures (Fig. 2, 2a, etc.). Folding plates will not be accepted. Figures composed of photographs should be glossy prints presented at publication scale. Figure captions must be typed with double-line spacing on sheets separate from the running text.

The accuracy of references is the responsibility of authors. References must be double-spaced and spelt out in full, e.g.

Gale, W A, ed 1986. Artificial Intelligence and statistics, Reading, Massachusetts: Addison-Wesley

Pearl, J 1984. Heuristics. Intelligent search strategies for problem solving, Reading, Massachusetts: Addison-Wesley

Tie-Cheng Wang and Bledsoe, W W, 1987. "Hierarchical deduction" Journal of Automated Reasoning 3 (1) pp 1-34.

Pau, L F, 1986. "Survey of expert systems for fault detection, test generation and maintenance" *Expert Systems*. 3 (2) pp 100–111.

Twenty Five offprints of each paper will be provided free of charge. Additional offprints may be purchased according to a set scale of charges if ordered when the proofs are returned.

The knowledge

VOLUME2 PART3 SEPTEMBER 1987 ISSN 0269-8889 CONTENTS

Special issue: Technology transfer and the evolution of knowledge engineering	
Editorial	145
A. Technology transfer	
Knowledge Transfer: A Key to Successful Application of Knowledge- Based Systems KIYOSHI NIWA	147
The Linköping Approach to Technology Transfer in Knowledge Engineering STURE HÄGGLUND	153
A Framework for Technology Transfer within AIAI MARK DRUMMOND, ANN MACINTOSH AND AUSTIN TATE	159
B. Commercialisation	
Commentary on the Commercialization of Knowledge Engineering Enterprise and Product Development	
BERNARD P. WESS JR	169
Trends in the Marketing of Expert System Technology LELAND TESCHLER	175
A Strategy for Near-Term Success Using Knowledge-Based Systems s. C. LAUFMANN	179
C. Country surveys	
Expert Systems in UK BUSINESS! A Critical Assessment A. D'AGAPEYEFF AND C. J. B. HAWKINS	185
Expert Systems in Business, A Japanese Experience FUMIHIKO MORI	203
D. Area surveys	
The Current Impact of Expert Systems on the Accounting Profession and Some Reasons for Hesitancy in the Adoption of Such Systems	207
Critical Notes: Artificial Intelligence and Legal Reasoning RICHARD SUSSKIND	213
From the journals	219
CAMBRIDGE UNIVERSITY PRESS Published by the Press Syndicate of the University of Cambridge The Pitt Building, Trumpington Street, Cambridge CB2 1RP 32 East 57th Street, New York, NY 10022, USA 10 Stamford Road, Oakleigh, Melbourne 3166, Australia	

Typeset by Eta Services (Typesetting) Ltd. Beccles Printed in Great Britain by Henry Ling Ltd, Dorchester