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Book reviews

The second international conference on artificial intelligence applications on Wall Street—Tactical and strategic computing technologies edited by R Freedman, Software Engineering Press, 1993, pp 311, $65.00 ISBN 0-9-38801-07-4.

The second International Conference on AI Applications on Wall Street took place in New York in April 1993. The first conference, held in 1991, was very successful, with many expert systems and other AI applications being described. The second conference follows two recession-bitten years; the contents of the conference are therefore of great interest, for IT systems which succeed in a cash-strapped economy ought to be good investments for several years to come.

The proceedings contain 42 papers spanning 300 pages, on topics including stock market prediction, trading workstation support, marketing and business strategies and understanding news. The majority of papers describe AI applications, for tasks such as intelligent program stock trading, network management, forecasting returns in bond markets and financial data modelling. The papers are generally informative and well-written; however, the brevity required for a volume where the average paper length is seven pages occasionally leaves the reader feeling that he has tasted something good, but has not been given enough to satisfy.

The balance between applications papers and more theoretical papers is good, especially given that the "theoretical" papers generally have a pragmatic slant to them. For example, one paper provides a useful discussion of recent amendments to the case law affecting the copyright of databases. Some of the applications papers appear to have a tenuous relationship with Wall Street (e.g. "A method to predict television audiences based on neural networks"); however, my opinion is that the inclusion of good quality papers on related topics enhances the proceedings, as long as there are not too many of them. I particularly liked the paper on "An expert system for adoption of innovation decisions", which is applicable not only for Wall Street, but for all industries where new technologies are being introduced.

If there is a theme to be drawn from this year's conference, it is that neural networks have replaced expert systems as the most popular AI technology on Wall Street. It may be the large volumes of financial data which Wall Street has collected, or it may be the comparative ease with which neural networks can be developed; whatever the reason, 15 or more of the application papers mention the use of neural networks, while only six describe expert systems. Other techniques which have been used include fuzzy reasoning, genetic algorithms and case-based reasoning. The conference organizers, having identified this theme, invited a speaker to talk on "Neural, genetic and fuzzy approaches to the design of trading systems", and this helpful introductory paper is included in the proceedings.

In conclusion, these proceedings are well worth purchasing if the reader is looking for an overview, or an introduction, to the use of AI in the world of stocks and shares.

Reviewed by John Kingston, AIAI, University of Edinburgh, UK

Explanation and interaction: The computer generation of explanatory dialogues by Alison Cawsey, MIT Press, USA, 1993, pp 232, £26.95, ISBN 0-262-03202-3

In this book, Alison Cawsey presents the results of her thesis work embodied in a system for the generation of explanatory discourse (EDGE). In doing so, she also provides overviews of the fields of text content planning, organization of discourse and user modelling, all of which contribute to the EDGE computerized tutoring system. Cawsey's work is perhaps unusual in not treating these