From: AAAI Technical Report WS-02-13. Compilation copyright © 2002, AAAI (www.aaai.org). All rights reserved.

Preferences in AI and CP: Symbolic Approaches

Papers from the AAAI Workshop
Technical Report WS-02-13

AAAI Press
American Association for Artificial Intelligence

Preferences in AI and CP: Symbolic Approaches

Papers from the AAAI Workshop

Ulrich Junker, Chair

Technical Report WS-02-13

AAAI Press
Menlo Park, California

Copyright © 2002, AAAI Press

The American Association for Artificial Intelligence
445 Burgess Drive
Menlo Park, California 94025 USA

AAAI maintains compilation copyright for this technical report and retains the right of first refusal to any publication (including electronic distribution) arising from this AAAI event. Please do not make any inquiries or arrangements for hardcopy or electronic publication of all or part of the papers contained in these working notes without first exploring the options available through AAAI Press and AI Magazine. A signed release of this right by AAAI is required before publication by a third party.

ISBN 1-57735-166-5 WS-02-13

Manufactured in the United States of America

AAAI Press

445 Burgess Drive
Menlo Park, California 94025

ISBN 1-57735-166-5 WS-02-13

Organizing Committee

Ulrich Junker, *ILOG S.A.* (chair)
James Delgrande, *Simon Fraser University*
Jon Doyle, *North Carolina State University*
Francesca Rossi, *University of Padova*
Torsten Schaub, *University of Potsdam*

This AAAI–02 Workshop was held July 28–29, 2002,
in Edmonton, Alberta, Canada

Contents

Preferences: Some Problems and Prospects / vii
Jon Doyle

Logic Programming with Ordered Disjunction / 1
Gerhard Brewka

Constructed Preferences and Value-Focused Thinking: Implications for AI Research on Preference Elicitation / 9
Giuseppe Carenini and David Poole

Towards a Classification of Preference Handling Approaches in Nonmonotonic Reasoning / 16
James P. Delgrande, Torsten Schaub, Hans Tompits, and Kewen Wang

Multi-Agent Meeting Scheduling with Preferences: Efficiency, Privacy Loss, and Solution Quality / 25
M. S. Franzin, E. C. Freuder, F. Rossi, and R. Wallace

Utility Functions for Ceteris Paribus Preferences / 33
Michael McGeachie and Jon Doyle

A Calculus of Partially Ordered Preferences for Compositional Modeling and Configuration / 39
Jeroen Keppens and Qiang Shen

Optimizing Temporal Preferences / 47
Lina Khatib, Paul Morris, and Robert Morris

Resolving Conflicts in Agent Guidance / 52
Karen L. Myers and David N. Morley

Constraints and Preferences: The Interplay of Preferences and Algorithms / 60
T. Schiex and M. Cooper

Eliciting Utilities by Refining Theories of Monotonicity and Risk / 67
Angelo Restificar, Peter Haddawy, Vu Ha, and John Miyamoto

Two Solvers for Tractable Temporal Constraints with Preferences / 73
F. Rossi, K.B. Venable, L. Khatib, P. Morris, and R. Morris

POET: The Online Preference Elicitation Tool / 80
James Royalty, Robert Holland, Judy Goldsmith, and Alex Dekhtyar

Constructing and Clearing Combinatorial Exchanges
Using Preference Elicitation / 87
Trey Smith, Tuomas Sandholm, and Reid Simmons

Preferences as Conclusions / 94
Richmond H. Thomason

Using Soft CSPs for Approximating Pareto-Optimal Solution Sets / 99
Marc Torrens and Boi Faltings

Meeting Scheduling with Preferences with Limited Comparability:
Effects of Agent Knowledge / 107
Richard J. Wallace and Eugene C. Freuder