Lecture Notes in Computer Science

Edited by G. Goos and J. Hartmanis

320

A. Blaser (Ed.)

Natural Language at the Computer

Scientific Symposium on Syntax and Semantics for Text Processing and Man-Machine-Communication
Held on the Occasion of the 20th Anniversary of the Science Center Heidelberg of IBM Germany
Heidelberg, FRG, February 25, 1988
Proceedings

Springer-Verlag
Berlin Heidelberg New York London Paris Tokyo

Editorial Board

D. Barstow W. Brauer P. Brinch Hansen D. Gries D. Luckham
C. Moler A. Pnueli G. Seegmüller J. Stoer N. Wirth

Editor

Albrecht Blaser
IBM Deutschland GmbH, Heidelberg Science Center
Tiergartenstraße 15, D-6900 Heidelberg, FRG

CR Subject Classification (1988): D.3.2–3, H.1.2, H.2.3, I.2.1, I.2.3–5, I.2.7

ISBN 3-540-50011-1 Springer-Verlag Berlin Heidelberg New York
ISBN 0-387-50011-1 Springer-Verlag New York Berlin Heidelberg

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in other ways, and storage in data banks. Duplication of this publication or parts thereof is only permitted under the provisions of the German Copyright Law of September 9, 1965, in its version of June 24, 1985, and a copyright fee must always be paid. Violations fall under the prosecution act of the German Copyright Law.

© Springer-Verlag Berlin Heidelberg 1988
Printed in Germany

Printing and binding: Druckhaus Beltz, Hemsbach/Bergstr.
2145/3140-543210

Contents

Introduction 1
A. Blaser

Keynote Address

Computational Linguistics: Issues and Solutions 9
M. King

Syntax and Grammatical Analysis

From Feature Bundles to Abstract Data Types: New Directions in the Representation and Processing of Linguistic Knowledge 31
H. Uszkoreit

Issues in Parsing 65
K. Jensen

Semantics and Discourse Analysis

Discourse Representation Theory: What It Is and Where It Ought to Go 84
H. Kamp

The LEX Project - Concepts and Results 112
H. Lehmann

From Sentences to Discourse: Some Aspects of the Computational Treatment of Language 147
F. Guenthner

Appendix

Computational Linguistics at the Heidelberg Science Center 166
M. Zoeppritz