

P R O C E E D I N G S
1 3 T H A N N U A L M E E T I N G
A S S O C I A T I O N F O R C O M P U T A T I O N A L L I N G U I S T I C S
1 : L A N G U A G E U N D E R S T A N D I N G S Y S T E M S

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PREFACE

The 13th annual ACL meeting was held at Boston, Massachusetts, October 30 - November 1, 1975, in conjunction with the 38th meeting of the American Society for Information Science. The ACL thanks the ASIS for its assistance in publicizing the conference and in handling registration.

This and the following four microfiches contain 27 of the 30 papers presented at the meeting. The breadth of the conference is evident in (a) the modes of communication investigated (speech, sign language, and written text), (b) the styles of communication (monologues, dialogues, and note making), and (c) the uses envisioned for the processing of language data (e.g., theoretical modeling, data collection and retrieval, game playing, story generation, idiolect characterization, and automatic indexing).

Topics considered include the development of language understanding systems, the integration and utilization of specific components of language, specifically syntax and semantics, the representation and use of discourse structure and general world knowledge, and the construction of text processing systems.

The program committee was solely responsible for selecting the talks to be given, and hence the papers to be published herein. (Regretfully, nearly half of those submitted

could not be accepted for lack of program time.) Members of the program committee were Jonathan Allen, Joyce Friedman, Bonnie Nash-Webber, and Chuck Rieger. A special word of appreciation is due Jonathan Allen, who also served as Local Arrangements Chairman. Working with him were Betty Brociner and Skip McAfee of the ASIS. Aravind Joshi, president of ACL, provided guidance in all areas of preparation.

The AJCL kindly provided advance publication of the accepted abstracts and now makes possible the publication of the entire proceedings. David Hays, editor of AJCL, provided guidance in publication format and each author provided final copy in accordance with requested specifications. The Center for Applied Linguistics (in particular, David Hoffman and Nancy Jokovich with guidance from Hood Roberts) contributed in a variety of ways, most notably in the preparation of meeting handbooks.

This microfiche contains the papers as submitted by their authors for five of the six talks touching on Language Understanding Systems. The paper detailing "Conceptual Grammar" by William Martin was too long for inclusion in ~~this~~ microfiche and will appear elsewhere. My thanks to Yorick Wilks for chairing the session.

--Timothy C. Diller

Program Committee Chairman

TABLE OF CONTENTS

Program Schedule	5
SESSION 1: LANGUAGE UNDERSTANDING SYSTEMS	
PEDAGLOT and Understanding Natural Language Processing <i>William Fabens</i>	9
A General System for Semantic Analysis of English and its Use in Drawing Maps from Directions <i>Jerry R. Hobbs</i> .	21
An Adaptive Natural Language Parser <i>Perry L. Miller</i> . . .	42
Conceptual Grammar (abstract only) <i>William A. Martin</i> . . .	57
Semantic-based Parsing and a Natural-language Interface for Interactive Data Management <i>John F. Burger, Antonio Leal, and Arie Shoshani</i>	58
PHLIQA 1: Multilevel Semantics in Question Answering <i>P. Medema, W. J. Bronnenberg, H. C. Bunt, S. P. J. Landsbergen, R. J. H. Scha, W. J. Schoenmakers, and E. P. C. van Utteren</i> . . .	72

THIRTEENTH ANNUAL MEETING
THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS

Sheraton Boston Hotel
Boston, Massachusetts

October 30-November 1, 1975

Thursday, October 30, 1975

SESSION 1: LANGUAGE UNDERSTANDING SYSTEMS

Session Chairman: Yorick Wilks - University of Edinburgh

- 9:00 A.M. *Greetings and Introductory Remarks*
- 9:15 A.M. *PEDAGLOT and Understanding Natural Language Processing*
 William Fabens - Rutgers University
- 9:40 A.M. *A System for General Semantic Analysis And Its Use*
In Drawing Maps from Directions
 Jerry R. Hobbs - The City College of CUNY
- 10:05 A.M. *An Adaptive Natural Language Parser*
 Perry L. Miller - MIT.
- 10:30 A.M. COFFEE & DONUTS
- 11:00 A.M. *Conceptual Grammar*
 William A. Martin - MIT
- 11:30 A.M. *Semantic-Based Parsing And A Natural-Language Interface*
For Interactive Data Management
 John F. Burger, Antonio Leal, and Arie Shoshani -
 System Development Corporation
- 12:00 NOON *PHILQA 1: Multilevel Semantics in Question Answering*
 P. Medema, et. al - Philips Research Laboratories,
 The Netherlands
- 12:30 P.M. LUNCHEON BREAK

SESSION 2: LANGUAGE GENERATION SYSTEMS

Session Chairman: Martin Kay - Xerox Corporation

- 2:00 P.M. *A Framework for Writing Generation Grammars
for Interactive Computer Programs*
David McDonald - MIT.
- 2:30 P.M. *Incremental Sentence Processing*
Rodger Knaus - Bureau of the Census
- 3:00 P.M. *A Lexical Process Model of Nominal Compounding
In English*
J.R. Rhyne - University of Houston
- 3:30 P.M. COFFEE & DONUTS
- 4:00 P.M. *Generation as Parsing from A Network into a
Linear String*
Stuart C Shapiro - Indiana University
- 4:30 P.M. *Speech Generation from Semantic Nets*
Jonathan Slocum - Stanford Research Institute
- 5:00 P.M. *Using Planning Structures to Generate Stories*
Jim Meehan - Yale University
- 5:30 P.M. DINNER BREAK
- 8:00 P.M. WINE, CHEESE & COMPUTER DEMONSTRATIONS

*Friday, October 31, 1975***SESSION 3: PARSING, SYNTAX, AND SEMANTICS**

Session Chairman: Joyce Friedman - Stanford Research Institute

- 9:00 A.M. *Syntactic Processing in the BBN Speech Understanding
System*
Madeline Bates - Bolt, Beranek & Newman, Inc
- 9:30 A.M. *System Integration and Control for Speech Understanding*
William H. Paxton and Ann E. Robinson
Stanford Research Institute
- 10:00 A.M. *A Tuneable Performance Grammar*
Jane J. Robinson - Stanford Research Institute

- 10:30 A.M. COFFEE & DONUTS
- 11:00 A.M. *Semantic Processing for Speech Understanding*
Gary G. Hendrix - Stanford Research Institute
- 11:30 A.M. *SPS: A Formalism for Semantic Interpretation and Its Use in Processing Propositions that Reference Space*
Norman K. Sondheimer - Ohio State University
- 12:00-NOON *The Nature and Computational Use of a Meaning Representation for Word Concepts*
Nick Cercone - University of Alberta
- 12:30 P.M. LUNCHEON BREAK

SESSION 4: MODELING DISCOURSE AND WORLD KNOWLEDGE I

Session Chairman: Carl Hewitt - MIT

- 2:00 P.M. *Establishing Context in Task-Oriented Dialogs*
Barbara G. Deutsch - Stanford Research Institute
- 2:30 P.M. *Discourse Models and Language Comprehension*
Bertram C. Bruce - Bolt, Beranek & Newman, Inc
- 3:00 P.M. *Judging the Coherency of Discourse (and Some Observations About Frames/Scripts)*
Brian Phillips - University of Illinois at Chicago Circle
- 3:30 P.M. COFFEE & DONUTS
- 4:00 P.M. *An Approach to the Organization of Mundane World Knowledge: the Generation and Management of Scripts*
R.E. Cullingford - Yale University
- 4:30 P.M. *The Conceptual Description of Physical Activities*
Norman Badler - University of Pennsylvania
- 5:00 P.M. *A Frame Analysis of American Sign Language*
Judy Kegl (MIT) and Nancy Chinchor (U. of Mass)
- 5:30 P.M. ACL BUSINESS MEETING AND ELECTION OF OFFICERS
- DINNER: ACL BANQUET

Saturday, November 1, 1975

SESSION 5A: MODELING DISCOURSE & WORLD KNOWLEDGE II

Session Chairman: Georgette Silva - System Development Corporation

9:00 A.M. *Cross-Sentential Reference Resolution*
David Klappholz and Abe Lockman - Columbia University

9:30 A.M. *How Does a System Know When to Stop Inferencing?*
Stan Rosenschein - University of Pennsylvania

10:00 A.M. COFFEE & DONUTS

SESSION 5B: TEXT ANALYSIS

10:30 A.M. *Developing a Computer System for Handling Inherently
Variable Linguistic Data*
David Beckles, Lawrence Carrington, and
Gemma Warner - The University of the West Indies

11:00 A.M. *A Natural Language Processing Package*
David Brill and Beatrice T. Oshika -
Speech Communications Research Laboratory

11:30 A.M. *On the Role of Words and Phrases in Automatic Text
Analysis and Computation*
Gerard Salton - Cornell University

12:00 NOON *Grammatical Compression in Notes and Records:
Analysis and Computation*
Barbara Anderson (University of New Brunswick),
Irwin Bross (Roswell Park Memorial Institute),
and Naomi Sager (New York University)